



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

August 10, 2016

Robert Avalos  
Manager of Registrations  
Loveland Products  
P.O. Box 1286  
Greeley, CO 80632-1286

Subject: Label and CSF Amendment – Label edits including revising into table format,  
revising Alternate CSF C  
Product Name: Glypho 648  
EPA Registration Number: 34704-929  
Application Date: March 31, 2016  
Decision Number: 516067

Dear Mr. Avalos:

The amended label and CSF referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, are acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Please note that the record for this product currently contains the following CSFs:

- Basic CSF dated 7/7/2015
- Alternate CSF A dated 1/6/2014
- Alternate CSF B dated 7/7/2015
- Alternate CSF C dated 7/21/2016
- Alternate CSF D dated 12/3/2015

*Continued on page 2 of 2*

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Emily Schmid by phone at 703-347-0189, or via email at [schmid.emily@epa.gov](mailto:schmid.emily@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Beth Baris for".

Reuben Baris, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

SUB-LABEL A - For non-aquatic terrestrial uses only

GROUP 9 HERBICIDE



# Glypho 648

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

**ACTIVE INGREDIENT:**

Glyphosate*, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt.....	53.80%
OTHER INGREDIENTS: .....	46.20%
<b>TOTAL</b>	<b>100.00%</b>

\*Contains 648 grams per liter or 5.4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 480 grams per liter or 4 pounds per U.S. gallon of the acid, glyphosate.

## KEEP OUT OF REACH OF CHILDREN CAUTION

For Additional Precautionary Statements, Complete First Aid, Directions for Use, Storage and Disposal and Other Use Information, See Inside This Label Booklet

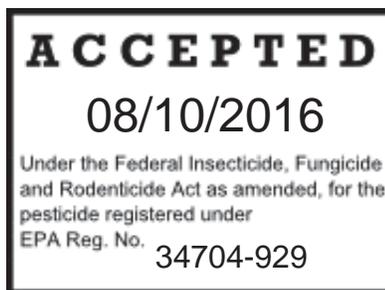
### FIRST AID

<b>If Inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have a person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.**

EPA REG. NO. 34704-929  
EPA EST. NO. 34704-XX-XXX  
NET CONTENTS 2.5 GAL (9.46 L)



EXP 0316

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## 1.0 INGREDIENTS

### ACTIVE INGREDIENT:

Glyphosate*, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt.....	53.80%
OTHER INGREDIENTS: .....	46.20%
<b>TOTAL</b>	<b>100.00%</b>

## 2.0 EMERGENCY PHONE NUMBERS

**24-Hour Emergency Phone:** 1-800-424-9300

**Medical Emergencies:** 1-866-944-8565

**U.S. Coast Guard National Response Center:** 1-800-424-8802

## 3.0 PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Domestic Animals: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.). If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

### 3.1 Physical or Chemical Hazards

Spray solutions of this product must be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

### 3.2 Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants,
- shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### 3.3 User Safety Recommendations

Users should:

- Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing or PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### 3.4 Environmental Hazards

FOR TERRESTRIAL USE ONLY: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations.

### 3.5 Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, are:

- coveralls,
- waterproof gloves,
- shoes plus socks.

### 3.6 Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

**Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.**

### 3.7 Seed Potato Precautions

Potatoes grown for seed are very sensitive to glyphosate at extremely low concentrations. Exposure of the seed potato crop can cause germination failure or deformities. Daughter tuber damage may occur at levels where mother crop symptoms are not viable. Multiple sprouting from eyes, weak and distorted stems, "little potato syndrome", cauliflower sprouts, root distortions, excessive root growth, suppressed tuber initiation and bulking failure or delay in opening of eyes and rotting of tubers in the field or store can result. Subsequent plantings of seed pieces from the exposed mother crop can result in delayed a no emergence or produce lower than normal yields.

Glyphosate can contaminate seed potato crops through carryover residue in application equipment or drift from applying glyphosate to nearby crops.

Always follow good wash-out procedures using detergents or other suitable cleaning agents to remove all residual traces of glyphosate from application equipment that may be used to apply other products to seed potato crops.

To avoid contamination from spray drift follow the precautions in the "Spray Drift Management" section of the label.

## 4.0 USE INFORMATION

**Product Description:** This product is a postemergent, systemic herbicide with no soil residual activity. It is generally non-selective and gives broad-spectrum control of many annual weeds, perennial weeds, woody brush and trees. It is formulated as a water-soluble liquid. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water or other carriers according to label instructions.

Surfactant may be included in the tank mixture if desired and should only be done so based on field experience or further instructions from your local extension service, crop consultant or field representative.

**Time to Symptoms:** This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow activity of this product and delay development of visual symptoms. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of aboveground growth and deterioration of underground plant parts.

**Stage of Weeds:** Annual weeds are easiest to control when they are small. Best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity. Refer to the annual, perennial, woody brush and trees rate tables for rates of specific weeds.

Always use the higher rate of this product per acre within the labeled range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

**Cultural Considerations:** Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the labeled stage for treatment.

**Rainfastness:** Heavy rainfall soon after application may wash this product off of the foliage and a repeat application may be required for adequate control.

**Spray Coverage:** For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

**Mode of Action:** The active ingredient in this product inhibits an enzyme found only in plants and microorganisms that is essential to formation of specific amino acids.

**No Soil Activity:** Weeds must be emerged at the time of application to be controlled by this product. Weeds germinating from seed after application will not be controlled. Unemerged plants arising from unattached underground rhizomes or rootstocks of perennials will not be affected by the herbicide and will continue to grow.

When this product comes in contact with soil, it is bound to soil particles. Under labeled use situations, once this product is bound to soil particles, it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treated area or if the soil is transported off-site. The strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entering ground water.

**Biological Degradation:** Degradation of this product is primarily a biological process carried out by soil microbes.

**Tank Mixing:** This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used. Use according to the most restrictive label directions for each product in the mixture.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly allowed in this labeling. Mixing this product with herbicides or other materials not labeled on this label may result in reduced performance.

**Annual Maximum Use Rate:** Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 4.5 quarts of this product per acre per year.

For noncrop uses, the combined total of all treatments must not exceed 6.0 quarts of this product per acre per year.

### **ATTENTION**

#### **AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.**

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift.

Refer to the Spray Drift Management guidance in Section 7.0

NOTE: Keep container closed to prevent spills and contamination.

## **5.0 WEED RESISTANCE MANAGEMENT**

Glyphosate, the active ingredient in this product, is a Group 9 herbicide. Target site resistance to Group 9 herbicides is rare. Any weed population may contain plants naturally resistant to Group 9 herbicides. Weed species resistant to Group 9 herbicides may be effectively managed utilizing another herbicide from a different Group or using other cultural practices or mechanical practices

### **5.1 Weed Management Directions**

To minimize the occurrence of glyphosate-resistant biotypes, observe the following weed management recommendations:

- Scout your fields before and after herbicide applications.
- Start with a clean field, use either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- One method of adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Utilize the labeled rate for the most difficult to control weed in your field. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture recommendations that encourage application rates of this product below the labeled rate.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Use new commercial seed that is as free of weed seed as possible.
- Report any incidence of repeated non-performance of this product on a particular weed to your Loveland Products, Inc. representative, local retailer, or county extension agent.

### **5.2 Management Directions for Glyphosate Resistance Biotypes**

Note: Appropriate testing is critical in order to determine if a weed is resistant to glyphosate. Contact your Loveland Products, Inc. representative to determine if resistance has been confirmed to any particular weed biotype in your area, or visit on the internet [www.weedresistancemangement.com](http://www.weedresistancemangement.com) or [www.weedscience.org](http://www.weedscience.org). For more information see the "ANNUAL WEEDS RATE SECTION" and "PERENNIAL WEEDS RATE SECTION" of this label.

Control directions for biotypes confirmed as resistant to glyphosate are made available on separately published supplemental labeling or fact sheets for this product and can be obtained from your local retailer or Loveland Products, Inc. representative.

Since the occurrence of new glyphosate resistant weeds cannot be determined until after product use and scientific confirmation, to the extent consistent with applicable law, Loveland Products, Inc. is not responsible for any losses that may result from the failure of this product to control glyphosate-resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed glyphosate resistant biotypes:

- If a naturally occurring resistant biotype is present in your field, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g. crop rotation or tillage) may also be used as appropriate.
- One method for adding other herbicides into a continuous Roundup Ready system is to rotate to other Roundup Ready crops.
- Scout treated fields after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

## 6.0 MIXING

Clean sprayer parts immediately after using this product by thoroughly flushing with water.

Precaution: Reduced results may occur if water containing soil is used, such as visibly muddy water or water that is not clear from ponds and ditches.

### 6.1 Mixing with Water

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the labeled amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

### 6.2 Surfactant

Surfactant may be included in the tank mixture if desired and should only be done so based on field experience or further recommendation of your local extension service, crop consultant or field representative.

### 6.3 Tank Mixing Procedure

Mix labeled tank mixtures of this product with water as follows:

1. Place a 20 to 35-mesh screen or wetting basket over filling port.
2. Through the screen, fill the spray tank one-half full with water and start agitation.
3. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
6. Continue filling the spray tank with water and add the required amount of this product near the end of the filling process.
7. When using nonionic surfactant add it to the spray tank before completing the filling process.
8. Add individual formulations to the spray tank as follows: wettable powder, flowable, emulsifiable concentrate, drift control additive, water-soluble liquid followed by surfactant.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed. Keep by-pass line on or near the bottom of the tank to minimize foaming. Screen size in nozzle or line strainers must be no finer than 50 mesh.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Always predetermine the compatibility of labeled tank mixtures of this product with water carrier by mixing small proportional quantities in advance.

Refer to the "TANK MIXING" section of "USE INFORMATION" for additional precautions.

## 6.4 Mixing for Hand-held Sprayers

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

### Spray Solution

Desired Volume	Amount of Glypho 648					
	0.75%	1.0%	1.5%	2.0%	5.0%	10.0%
1.0 gal	1.0 fl oz	1.33 fl oz	2.0 fl oz	2.66 fl oz	6.5 fl oz	13.0 fl oz
25.0 gal	1.5 pt	1.0 qt	1.5 qt	2.0 qt	5.0 qt	10.0 qt
100 gal	3.0 qt	1.0 gal	1.5 gal	2.0 gal	5.0 gal	10.0 gal

2.0 tablespoons = 1.0 fluid ounce

For use in knapsack sprayers, it is suggested that the labeled amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution

## 6.5 Ammonium Sulfate

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17.0 pounds per 100 gallons of water may increase the performance of this product when tank mixed with certain residual herbicides on annual and perennial weeds. The equivalent rate of ammonium sulfate in a liquid formulation may also be used. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: When using ammonium sulfate, apply this product at rates labeled in this label. Lower rates will result in reduced performance.

## 6.6 Colorants or Dyes

Agriculturally approved colorants or marking dyes may be added to this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's directions.

## 6.7 Drift Control Additives

Drift control additives may be used with all equipment types, except wiper applicators, sponge bars and CDA equipment. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

## 7.0 APPLICATION EQUIPMENT AND TECHNIQUES

Do not apply this product through any type of irrigation system.

This product may be applied with the following application equipment:

Aerial - Fixed Wing and Helicopter

Ground Broadcast Spray - Boom or boomless systems, pull-type sprayer, floaters, pick-up sprayers, spray coupes and other ground broadcast equipment.

Hand-held and High-Volume Spray Equipment - Knapsack and backpack sprayers, pump-up pressure sprayers, handguns, handwands, mistblowers\*, lances and other hand-held and motorized spray equipment used to direct the spray onto weed foliage.

\*This product is not registered in California or Arizona for use in mistblowers.

Selective Equipment - Recirculating sprayers, shielded and hooded sprayers, wiper applicators and sponge bars.

Injection Systems - Aerial or ground injection sprayers.

Controlled Droplet Applicator (CDA) - Hand-held or boom-mounted applicators which produce a spray consisting of a narrow range of droplet sizes.

Apply these spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes.

## 7.1 Aerial Equipment

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

Use the labeled rates of this herbicide in 3.0 to 15.0 gallons of water per acre unless otherwise specified on this label. Unless otherwise specified, do not exceed 24.0 fluid ounces per acre. Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems and preharvest applications. Refer to the individual use area sections of this label for labeled volumes and application rates.

NOTE: For aerial application in California or Arkansas, refer to the Federal supplemental label for aerial applications in that state for specific instructions, restrictions and requirements. For aerial applications, consult with state or local authorities regarding any additional requirements for aerial treatments.

Dicamba tank mixtures may not be applied by air in California. Avoid direct application to any body of water.

AVOID DRIFT - DO NOT APPLY DURING LOW-LEVEL INVERSION CONDITIONS, WHEN WINDS ARE GUSTY OR UNDER ANY OTHER CONDITION WHICH FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT IS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills.

Prolonged exposure of this product to uncoated steel surfaces may result in corrosion and possible failure of the part. Landing gear are most susceptible.

The maintenance of an organic coating (paint), which meets aerospace specification MIL-C-38413, may prevent corrosion.

## 7.2 Aerial Spray Drift Management

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
3. Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the [Aerial Drift Reduction Advisory](#).

### **Aerial Drift Reduction Advisory**

This section is advisory in nature and does not supersede the mandatory label requirements.

### **Information on droplet size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

### **Controlling droplet size**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orient nozzles so that the spray is released parallel to the airstream which produces larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### **Boom length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

### **Application height**

Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### **Swath adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.)

### **Wind**

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

### **Temperature and humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

### **Temperature inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **Sensitive areas**

The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### 7.3 Ground Broadcast Equipment

Use the labeled rates of this product in 3.0 to 40.0 gallons of water per acre as a broadcast spray unless otherwise specified. As density of weeds increases, also increase the spray volume within the labeled range to ensure complete coverage. Carefully select proper nozzles to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

### 7.4 Hand-Held and High-Volume Equipment

Apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage must be uniform and complete. Do not spray to the point of runoff. Use coarse sprays only. For control of weeds listed in the annual weeds rate tables, apply a 0.5 percent solution of this product to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. For annual weeds over 6 inches tall, or unless otherwise specified, use a 1 percent solution.

For best results, use a 1.5 percent solution on harder-to-control perennials, such as Bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

When using application methods which result in less than complete coverage, use a 3.75 percent solution for annual and perennial weeds and a 3.75 to 5.0 percent solution for woody brush and trees.

### 7.5 Selective Equipment

This product may be applied through recirculating spray systems, shielded applicators, hooded sprayers, wiper applicators or sponge bars after dilution and thorough mixing with water to listed weeds growing in any noncrop site specified on this label and only when specifically labeled in cropping systems.

A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.

A shielded or hooded applicator directs the herbicide solution onto weeds, while shielding desirable vegetation from the herbicide.

A wiper or sponge applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

#### AVOID CONTACT OF HERBICIDE WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desirable vegetation must be adjusted so that the lowest spray stream or wiper contact point is at least 2 inches above the desirable vegetation. Droplets, mist, foam, or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Make applications above the crops when the weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat applications can be made up to the maximum number of applications for that use site.

**Shielded and hooded applicators:** Use nozzles that provide uniform coverage within the treated area. Keep shields on these sprayers adjusted to protect desirable vegetation. Extreme care must be exercised to avoid contact of herbicide with desirable vegetation.

A hooded sprayer is a type of shielded applicator. The spray pattern is completely enclosed on the top and all 4 sides by a hood, thereby shielding the crop from the spray solution. This equipment must be set up and operated in a manner that avoids bouncing or raising the hoods off the ground in any way. If the hoods are raised, spray particles may escape and come into contact with the crop, causing damage or destruction of the crop. The spray hoods must be operated on the ground or skimming across the ground. Tractor speed must be adjusted to avoid bouncing of the spray hoods. Avoid operation on rough or sloping ground where the spray hoods might be raised off the ground.

**Wiper applicators and sponge bars:** Wiper applicators are devices that physically wipe appropriate amounts of this product directly onto the weed.

Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if 2 applications are made in opposite directions.

Avoid leakage or dripping onto desirable vegetation. Adjust height of applicator to ensure adequate contact with weeds. Keep wiping surfaces clean. Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying of the wicks on the upper end of a wiper applicator.

Do not use wiper equipment when weeds are wet.

Mix only the amount of solution to be used during a 1-day period, as reduced activity may result from use of leftover solutions. Clean wiper parts immediately after using this product by thoroughly flushing with water.

Include a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution with all wiper applications.

For Rope or Sponge Wick Applicators - Mix 3.0 quarts of this product in 2.0 gallons of water to prepare a 25 percent solution. Apply this solution to weeds listed in this section.

For Porous-Plastic Applicators - Solutions ranging from 25 to 100 percent of this product in water may be used in porous-plastic wiper applicators.

When applied as labeled, this product CONTROLS the following weeds:

Corn, volunteer	Panicum, Texas	Rye, common	Shattercane
Sicklepod	Spanishneedles	Starbur, bristly	

When applied as labeled, this product SUPPRESSES the following weeds:

Beggarweed, Florida	Bermudagrass	Dogbane, hemp	Dogfennel	Guineagrass	Johnsongrass
Milkweed	Nightshade, silverleaf	Pigweed, redroot	Ragweed, common	Ragweed, giant	Smutgrass
Sunflower	Thistle, Canada	Thistle, musk	Vaseygrass	Velvetleaf	

## 7.6 Injection Systems

This product may be used in aerial or ground injection spray systems. It may be used as a liquid concentrate or diluted prior to injecting into the spray stream.

RESTRICTION:

- Do not mix this product with the concentrate of other products when using injection systems.

## 7.7 CDA Equipment

The rate of this product applied per acre by vehicle-mounted CDA equipment must not be less than the amount labeled in this label when applied by conventional broadcast equipment. For vehicle-mounted CDA equipment, apply 3.0 to 15.0 gallons of water per acre.

For the control of annual weeds with hand-held CDA units, apply a 20 percent solution of this product at a flow rate of 2.0 fluid ounces per minute and a walking speed of 1.5 mph (1.5 pints per acre). For the control of perennial weeds, apply a 20 to 40 percent solution of this product at a flow rate of 2.0 fluid ounces per minute and a walking speed of 0.75 mph (3.0 to 6.0 pints per acre).

Controlled droplet application equipment produces a spray pattern which is not easily visible. Extreme care must be exercised to avoid spray or drift contacting the foliage or any other green tissue of desirable vegetation, as damage or destruction may result.

## **CROPS (Alphabetical)**

### **8.0 ANNUAL and PERENNIAL CROPS (Alphabetical)**

This section is organized alphabetically by crop category. There may be several labeled crops listed in a crop category.

See the individual crop categories for specific instructions, preharvest intervals, and additional precautions and restrictions.

See the "ROUNDUP READY CROPS" section of this label or separately published Loveland Products, Inc. supplemental labeling for instructions for treating Roundup Ready crops.

#### **TYPES OF APPLICATIONS**

Chemical fallow, Pre-plant fallow beds, Pre-plant, Pre-emergence, At Planting, Hooded Sprayers in Row-Middles, Shielded Sprayers in Row-Middles, Wiper Applications in Row-Middles, and Post-Harvest Treatments.

Additional application types may be specified or allowed in individual Crop Categories.

#### **USE DIRECTIONS**

Apply this product during fallow intervals preceding planting, prior to planting or transplanting, at planting, or pre-emergent to annual and perennial crops listed in this label, except where specifically limited. For any crop NOT listed in this label, applications must be made at least 30 days prior to planting.

Unless otherwise specified weed control applications must be made according to the rates listed in the "Annual Weeds", Perennial Weeds", and "Woody Brush and Trees" rate tables in this label.

Post-directed hooded sprayers and wiper equipment capable of preventing all crop contact with herbicide solutions may be used in mulched or un-mulched row middles after crop establishment. Where specifically noted below, wipers may also be used above certain crops to control tall weeds. Refer to the "SELECTIVE EQUIPMENT" section of this label for essential precautions when using hooded sprayers or wipers to avoid crop injury caused by leakage of spray mists or dripping onto crops. Crop injury is possible with these applications and shall be the sole responsibility of the applicator.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

#### **PRECAUTIONS**

- Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.
- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.

#### **RESTRICTIONS**

- Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- In crops where spot treatments are allowed, do not treat more than 10 percent of the total field to be harvested. The crop receiving spray in treated area will be killed. Take care to avoid drift or spray outside the target area for the same reason.
- When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury. Broadcast applications made at emergence will result in injury or death to emerged seedlings.
- Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
- For broadcast post-emergent treatments, do not harvest or feed treated vegetation for 8 weeks following application, unless otherwise specified.

## 8.1 - Cereal and Grain Crops

LABELED CROPS: Barley, Buckwheat, Millet (Pearl and Proso), Oats, Rice, Rye, Quinoa, Teff, Teosinte, Triticale, Wheat (All), Wild rice

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.0  Pre-Plant, Pre-Emergence, At-Planting	See Use Directions in Section 8.0  This product may be applied before, during or after planting of cereal crops. Applications must be made prior to emergence of the crop.	See Section 8.0  Do not treat rice fields or levees when the field contains floodwater.
Red Rice Control (prior to planting rice)	Apply 2.25 pints (36.0 fl oz) of this product in 5.0 to 10.0 gallons of water per acre. Flush fields prior to application to obtain uniform germination and stand of red rice. Make application when the majority of the red rice plants are in the 2-leaf stage and no more than 4 inches tall. Red rice plants with less than 2 true leaves may only be partially controlled.  Avoid spraying during low humidity conditions, as reduced control may result.	Do not treat rice field or levees when the fields contain flood water.  Do not re-flood treated fields for 8 days following application.
Spot treatment (except rice)	This product may be applied as a spot treatment in cereal crops. Apply this product before heading in small grains.	Do not treat more than 10 percent of the total field area to be harvested.  The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.
Over the Top Wiper applications (Feed barley and wheat only)	Wiper applications may be used in wheat. To control common rye or cereal rye, apply after the weeds have headed and achieved maximum growth, when the rye is at least 6 inches above the wheat crop.	Allow at least 35 days between application and harvest.  Do not use roller applicators.
Pre-harvest (Feed barley and wheat only)	This product provides weed control when applied prior to harvest of wheat. Apply after the hard-dough stage of grain (30% or less grain moisture) and at least 7 days prior to harvest. Wheat stubble may be grazed immediately after harvest.  This product may be applied using either aerial or ground spray equipment. For ground applications, apply this product in 10.0 to 20.0 gallons of water per acre. For aerial applications, apply this product in 3.0 to 10.0 gallons of water per acre.	Do not apply more than 1.5 pints of this product per acre.  Do not apply to wheat or barley grown for seed.  Allow 7 days between application and harvest or grazing.
Post-harvest	This product may be applied after harvest of cereal crops. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.	For any crop not listed on this label, applications must be made at least 30 days prior to planting the next crop.  Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.

## 8.2 - Corn (Non-Roundup Ready)

LABELED CROPS: Field corn, Seed corn, Silage corn, Sweet corn and Popcorn

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS																														
<p>See Section 8.0</p> <p>Pre-plant, Pre-emergence, At planting</p>	<p>See Use Directions in Section 8.0</p> <p>This product may be applied before, during or after planting corn. Applications must be made prior to emergence of the crop.</p> <p>TANK MIXTURES: Apply these tank mixtures in 10.0 to 20.0 gallons of water or 10.0 to 60.0 gallons of nitrogen solution per acre. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <table border="0"> <tr> <td>2,4-D</td> <td>Distinct</td> <td>Lariat</td> </tr> <tr> <td>Aim</td> <td>Dual Magnum</td> <td>Intro</td> </tr> <tr> <td>Atrazine</td> <td>Dual II Magnum</td> <td>Linex/Lorox</td> </tr> <tr> <td>Axiom</td> <td>Epic</td> <td>Marksman</td> </tr> <tr> <td>Balance</td> <td>Frontier/Outlook</td> <td>Micro-Tech</td> </tr> <tr> <td>Bicep Magnum</td> <td>Fultime</td> <td>Prowl</td> </tr> <tr> <td>Bicep II Magnum</td> <td>Guardsman/Leadoff</td> <td>Python</td> </tr> <tr> <td>Bullet</td> <td>Harness</td> <td>simazine</td> </tr> <tr> <td>Degree</td> <td>Harness Xtra</td> <td>Topnotch</td> </tr> <tr> <td>Degree Xtra</td> <td>Harness Xtra 5.6L</td> <td></td> </tr> </table> <p>For difficult to control annual weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signal grass up to 2 inches tall and Pennsylvania smartweed up to 6 inches tall, apply this product at 1.5 pints (24.0 fl oz) per acre in these tank mixtures. For other labeled weeds, apply 1.0 to 1.5 pints (16.0 to 24.0 fl oz) of this product per acre when weeds are less than 6 inches tall, 1.5 to 2.25 pints (24.0 to 36.0 fl oz) when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, use rate may need to be increased to the 2.25 pints (36.0 fl oz) rate for acceptable weed control.</p>	2,4-D	Distinct	Lariat	Aim	Dual Magnum	Intro	Atrazine	Dual II Magnum	Linex/Lorox	Axiom	Epic	Marksman	Balance	Frontier/Outlook	Micro-Tech	Bicep Magnum	Fultime	Prowl	Bicep II Magnum	Guardsman/Leadoff	Python	Bullet	Harness	simazine	Degree	Harness Xtra	Topnotch	Degree Xtra	Harness Xtra 5.6L		<p>See Section 8.0</p> <p>Do not apply in nitrogen solutions to tough-to-control grasses such as barnyardgrass, fall panicum, broadleaf signalgrass, annual ryegrass and any perennial weeds in the following area:</p> <p>From Route 50 South in Illinois and Indiana and the following states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia.</p>
2,4-D	Distinct	Lariat																														
Aim	Dual Magnum	Intro																														
Atrazine	Dual II Magnum	Linex/Lorox																														
Axiom	Epic	Marksman																														
Balance	Frontier/Outlook	Micro-Tech																														
Bicep Magnum	Fultime	Prowl																														
Bicep II Magnum	Guardsman/Leadoff	Python																														
Bullet	Harness	simazine																														
Degree	Harness Xtra	Topnotch																														
Degree Xtra	Harness Xtra 5.6L																															
<p>Spot treatment</p>	<p>For spot treatments, apply this product prior to silking of corn.</p>	<p>Do not treat more than 10 percent of the total field area to be harvested.</p> <p>The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.</p>																														
<p>Hooded sprayers</p>	<p>This product may be used through hooded sprayers for weed control between the rows of corn. Only hooded sprayers that completely enclose the spray pattern may be used.</p> <p>See additional instructions for the use of hooded sprayers in the "<b>APPLICATION EQUIPMENT AND TECHNIQUES</b>" section of this label.</p> <p>Precaution: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator.</p>	<p>Corn must be at least 12 inches tall, measured without extending leaves.</p> <p>Do not apply more than 1.5 pints (24.0 fl oz) of this product per acre for each application and no more than 2.25 quarts (72.0 fl oz) per acre per year for hooded sprayer applications.</p>																														

## 8.2 - Corn (Non-Roundup Ready)

LABELED CROPS: Field corn, Seed corn, Silage corn, Sweet corn and Popcorn

<b>TYPES OF APPLICATIONS</b>	<b>USE DIRECTIONS</b>	<b>RESTRICTIONS</b>
Pre-harvest	<p>Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).</p> <p>For ground applications, apply up 2.25 quarts (72.0 fl oz) of this product per acre.</p> <p>For aerial applications, apply up to 3.0 pints (48.0 fl oz) of this product per acre.</p>	<p>Allow a minimum of 7 days between application and harvest.</p> <p>Do not make applications to corn grown for seed.</p>
Post-harvest	<p>This product may be applied after harvest of corn. Higher rates may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.</p>	<p>Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.</p>

## 8.3 - Cotton (Non-Roundup Ready)

LABELED CROPS: Cotton

<b>TYPES OF APPLICATIONS</b>	<b>USE DIRECTIONS</b>	<b>RESTRICTIONS</b>
See Section 8.0	See Use Directions in Section 8.0	See Section 8.0
Pre-plant, Pre-emergence, At-planting	<p>This product may be applied before, during or after planting cotton.</p>	<p>Applications must be made prior to emergence of the crop.</p>
Hooded sprayer, Selective equipment	<p>This product may be applied through hooded sprayers, shielded applicators or wiper applicators in cotton.</p>	<p>See the "Selective Equipment" part of the "Application Equipment and Techniques" section of this label for information on proper use and calibration of this equipment.</p> <p>Allow at least 7 days between application and harvest.</p>
Spot treatment	<p>For spot treatments, apply this product prior to boll opening of cotton.</p>	<p>Do not treat more than 10 percent of the total field area to be harvested.</p> <p>The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.</p>
Pre-harvest	<p>This product provides weed control and cotton regrowth inhibition when applied prior to harvest of cotton. For weed control, apply at rates given in the annual, perennial and woody brush tables. Apply 12.0 to 48.0 fl oz of this product per acre for cotton regrowth inhibition.</p> <p>Apply up to 3.0 pints (48.0 fl oz) of this product using either aerial or ground spray equipment. Apply after sufficient bolls have developed to produce the desired yield of cotton. Applications made prior to this time could affect maximum yield potential.</p>	<p>Allow at least 7 days between application and harvest.</p> <p>Do not apply to cotton grown for seed, as a reduction in germination or vigor may occur.</p> <p>The use of additives other than those listed on this label, for preharvest application to cotton is prohibited.</p>

### 8.3 - Cotton (Non-Roundup Ready)

LABELED CROPS: Cotton

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Pre-harvest cont'd</i>	<p>TANK MIXTURES: This product may be tank mixed with DEF<sup>®</sup> 6, Folex<sup>®</sup>, Ginstar or Prep<sup>™</sup> to provide additional enhancement of cotton leaf drop. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p>	

### 8.4 - Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Chemical Fallow	<p>See Use Directions in Section 8.0</p> <p>This product may be applied during the fallow period prior to planting or emergence of any crop listed on this label.</p> <p>This product may be used as a substitute for tillage to control annual weeds in fallow fields. Also, broadcast or spot treatments will control or suppress many perennial weeds in fallow fields. Ground or aerial application equipment may be used. Tank mixtures with 2,4-D and dicamba may be used. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>Applications up to 3.0 pints (48.0 fl oz) per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops.</p>	<p>See Section 8.0</p> <p>For any crop not listed on this label, applications must be made at least 30 days prior to planting.</p> <p>Do not apply dicamba tank mixtures by air in California.</p> <p>Refer to the specific product labels for crop rotation restrictions and cautionary statements of all products used in tank mixtures.</p>
Pre-plant Fallow Beds	<p>This product may be applied to fallow beds prior to planting or emergence of any crop listed on this label. This product will control weeds listed in the annual, perennial and woody brush tables.</p> <p>TANK MIXTURES: It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>In addition, 9.0 fl oz of this product plus the labeled rate of Goal<sup>®</sup> 2XL (or generic equivalent) per acre will control the following weeds with the maximum height or length indicated: 3" - Common cheeseweed, Chickweed, Groundsel; 6" - London rocket, Shepherdspurse.</p>	

## 8.4 - Fallow Systems

LABELED CROPS: This product may be applied during the fallow period prior to planting or emergence of any crop on this label.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Pre-plant Fallow Beds cont'd</i>	<p>12.0 fl oz of this product plus the labeled rate of Goal<sup>®</sup> 2XL (or generic equivalent) per acre will control the following weeds with the maximum height or length indicated: 6" - Common cheeseweed, Groundsel, Maretail (<i>Conyza canadensis</i>), 12" - Chickweed, London rocket, Shepherdspurse.</p> <p>PRECAUTION: Some crop injury may occur if dicamba is applied within 45 days of planting.</p>	
Aid-to-Tillage	<p>This product may be used in conjunction with tillage practices in fallow systems or pre-plant to labeled crops to control downy brome, cheat, volunteer wheat, tansy mustard and foxtail. Apply 9.0 fl oz of this product in 3.0 to 10.0 gallons of water per acre. Make applications before weeds are 6 inches in height. Application must be followed by conventional tillage practices no later than 15 days after treatment and before regrowth occurs.</p> <p>PRECAUTION: Tank mixtures with residual herbicides may result in reduced performance. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p>	Allow at least 1 day after application before tillage.

## 8.5 - Grain Sorghm (Milo)

LABELED CROPS: Grain Sorghum (Milo)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS								
<p>See Section 8.0</p> <p>Pre-Plant, Pre-Emergence, At-Planting</p>	<p>See Use Directions in Section 8.0</p> <p>This product may be applied alone or in tank mixture before, during or after planting grain sorghum. Applications must be made prior to emergence of the crop.</p> <p>TANK MIXTURES: Apply these tank mixtures in 10.0 to 20.0 gallons of water or 10.0 to 60.0 gallons of nitrogen solution per acre. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <table border="0"> <tr> <td>Atrazine</td> <td>Lariat</td> </tr> <tr> <td>Bicep II Magnum</td> <td>Lasso</td> </tr> <tr> <td>Bullet</td> <td>Micro-Tech</td> </tr> <tr> <td>Dual II Magnum</td> <td>Milo-Pro</td> </tr> </table> <p>For difficult-to-control annual weeds such as Fall panicum, Barnyardgrass, Crabgrass, Shattercane and Broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 1.5 pints (24.0 fl oz) per acre in these tank mixtures. For other labeled annual weeds, apply 18.0 to 24.0 fl oz of this product per</p>	Atrazine	Lariat	Bicep II Magnum	Lasso	Bullet	Micro-Tech	Dual II Magnum	Milo-Pro	<p>See Section 8.0</p> <p>For spot treatment, do not treat more than 10 percent of the total field area to be harvested.</p> <p>The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.</p> <p>For wiper applicators, allow at least 40 days between application and harvest.</p> <p>Do not use roller applicators.</p> <p>Do not feed or graze treated milo fodder. Do not ensile treated vegetation.</p>
Atrazine	Lariat									
Bicep II Magnum	Lasso									
Bullet	Micro-Tech									
Dual II Magnum	Milo-Pro									

## 8.5 - Grain Sorghm (Milo)

LABELED CROPS: Grain Sorghum (Milo)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Pre-Plant, Pre-Emergence, At-Planting cont'd</i>	acre when weeds are less than 6 inches tall, and 1.5 to 2.25 pints (24.0 to 36.0 fl oz) when weeds are over 6 inches tall. When using nitrogen solutions as the carrier, the 2.25 pints (36.0 fl oz) use rate may need to be increased for acceptable weed control.	
Spot Treatment, Over-the-Top Wiper Applications	This product may be applied as a spot treatment in grain sorghum. Make spot treatments before heading of milo. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.	
Hooded Sprayers	<p>This product may be used through hooded sprayers for weed control between the rows of milo. Only hooded sprayers that completely enclose the spray pattern may be used. See additional instruction for the use of hooded sprayers in the "APPLICATIONS EQUIPMENT AND TECHNIQUES" section of this label.</p> <p>Treat before milo sends tillers between the drill rows. If such tillers are contacted with the spray solution, the main plant may be killed. Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage. To the extent consistent with applicable law, such damage is the responsibility of the applicator.</p> <p>Crop injury may occur when the foliage of treated weeds comes into direct contact with leaves of the crop. Droplets, mist, foam or splatter of the herbicide solution may contact the crop and cause discoloration, stunting or destruction.</p>	<p>Milo must be at least 12 inches tall, measured without extending leaves.</p> <p>Do not graze or feed milo forage or fodder following applications of this product through hooded sprayers.</p> <p>Do not apply more than 1.5 pints (24.0 fl oz) of this product per acre per application and no more than 2.25 quarts (72.0 fl oz) per acre for hooded sprayer applications.</p> <p>Do not apply this product when the leaves of the crop are growing in direct contact with weeds to be treated.</p>
Pre-harvest	<p>Make applications at 30% grain moisture or less.</p> <p>As with other herbicides that cause sudden plant death, avoid pre-harvest applications of this product to milo infected with charcoal rot as lodging can occur.</p>	<p>Do not apply more than 3.0 pints (48.0 fl oz) of this product per acre.</p> <p>Allow a minimum of 7 days between application and harvest of sorghum.</p> <p>The use of this product for pre-harvest grain sorghum (milo) is not registered in California.</p> <p>Do not make applications to sorghum grown for seed.</p>
Post-harvest	<p>This product may be applied after harvest of grain sorghum. A 2.25 pints (36.0 fl oz) rate may be required for control of large weeds which were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.</p> <p>This product may be applied to grain sorghum (milo) stubble following harvest to suppress or control regrowth. Apply 1.5 pints (24.0 fl oz) of this product per acre for control, or 18.0 fl oz of this product per acre for suppression.</p>	<p>Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.</p>

## 8.6 - Herbs And Spices

LABELED CROPS: Allspice, Angelica, Star anise, Annatto (seed), Balm, Basil, Borage, Burnet, Chamomile, Caper buds, Caraway, Black caraway, Cardamom, Cassia bark, Cassia buds, Catnip, Celery seed, Chervil (dried), Chive, Chinese chive, Cilantro (seed), Cinnamon, Clary, Clove buds, Coriander leaf (cilantro or Chinese parsley), Coriander seed (cilantro), Costmary, Culantro (leaf), Cumin, Curry (leaf), Dill (dillweed), Dill (seed), Epazote, Fennel seed (common and Florence), Fenugreek, White ginger flower, Grains of paradise, Horehound, Hyssop, Juniper berry, Lavender, Lemongrass, Lovage (leaf and seed), Mace, Marigold, Marjoram (including oregano), Mexican oregano, Miaga flower, Mustard (seed), Nasturtium, Nutmeg, Parsley (dried), Pennyroyal, Pepper (black and white), Pepper leaves, Peppermint, Perilla, Poppy (seed), Rosemary, Rue, Saffron, Sage, Savory (summer and winter), Spearmint, Stevia leaves, Sweet bay, Tansy, Tarragon, Thyme, Vanilla, Wintergreen, Woodruff, Wormwood.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.0	<p>See Use Directions in Section 8.0</p> <p>PRECAUTION: This product could cause crop injury. When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove product residues from the plastic prior to planting.</p> <p>Residual product can be removed by a single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care must be taken to ensure that the washwater flushes off the plastic mulch and does not enter transplant holes. Applications made at emergence will result in injury or death to emerged seedlings. For some crops below, applications must be made 3 days before transplanting or planting.</p>	See Section 8.0
<p>Over-the-Top Wiper Application, Spot Treatment</p> <p>(Peppermint and Spearmint only)</p>	<p>This product may be applied as a spot treatment or over the top of peppermint or spearmint with wiper applications in spearmint and peppermint. Apply spot treatments on a spray-to-wet basis with hand-held equipment, such as backpack sprayers, pump-up pressure sprayers, hand-guns, hand-wands or any other hand-held or motorized spray equipment used to direct the spray solution to a limited area.</p> <p>In wiper applications, the applicator must be adjusted so that the wiper contact point is at least 2 inches above the crop. Weeds should be a minimum of 6 inches taller than the crop.</p> <p>PRECAUTION: Contact of the herbicide solution with the crop may result in discoloration, stunting, or destruction.</p> <p>Further applications may be made in the same area at 30-day intervals.</p>	<p>Allow at least 7 days between application and harvest.</p> <p>In spot treatment applications, no more than 10 percent of the total field area to be harvested can be treated at one time.</p> <p>The crop receiving spray in the treated area will be killed. Do not spray or allow drift outside target area for the same reason.</p>

## 8.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola (non-Roundup Ready), Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.0	<p>See Use Directions in Section 8.0</p> <p>This product may be applied before, during or after planting oil seed crops listed in this section. Broadcast applications must be made prior to crop emergence. Wiper applications or hooded sprayers may be used between the rows once the crop is established.</p>	<p>See Section 8.0</p> <p>For use with canola, do not apply more than 1.5 quarts (48.0 fl oz) of this product per acre.</p>

## 8.7 Oil Seed Crops

LABELED CROPS: Borage, Buffalo gourd (seed), Canola (non-Roundup Ready), Crambe, Flax, Jojoba, Lesquerella, Meadowfoam, Mustard (seed), Rape, Safflower, Sesame, Sunflower.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>See Section 8.0 cont'd</i>	TANK MIXTURES: For sunflowers, a tank mixture with Prowl may be applied according to the labeled directions for that product.	For use with sunflowers, do not apply more than 0.75 quart (24.0 fl oz) of this product per acre as a single pre-plant or pre-emergence application per year.  Do not feed or graze sunflower forage following application of this product.
Pre-Harvest  (Sunflower and safflower)	This product provides weed control when applied as a harvest aid to a physiologically mature crop prior to harvest of sunflower or safflower.  For safflower, apply when seed has lost its opaque character, approximately 20 to 30 days after the end of flowering of the secondary branches.  For sunflower, apply when the backsides of sunflower heads are yellow and bracts are turning brown and seed moisture content is less than 35%.	Allow a minimum of 7 days between treatment and harvest or livestock feeding.  Apply no more than 72.0 fl oz (2.25 quarts) of this product at a pre-harvest timing to safflower.  Apply no more than 1.5 pints (24.0 fl oz) of this product at a pre-harvest timing to sunflower.
Post-Harvest  (Sunflower and safflower)	This product may be applied after harvest of safflower or sunflower. A 2.25 pints (36.0 fl oz) per acre rate may be required for control of large weeds, which are growing in the crops at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.	Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.  Applications must be made at least 30 days prior to planting any crop not listed on the Glyphosate 53.8% label booklet.

## 8.8 - Soybeans

LABELED CROPS: Soybeans (non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.0  Pre-Plant, Pre-Emergence, At-Planting	See Use Directions in Section 8.0  This product may be applied before, during or after planting soybeans. Applications must be made prior to emergence of the crop.  Products that can be tank mixed with this product are in the table below. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.  This product may be tank-mixed with 2,4-D or 2,4-DB. See the 2,4-D label for intervals between application and planting.	See Section 8.0  The tank mix directions in this section are not registered in California.

## 8.8 - Soybeans

LABELED CROPS: Soybeans (non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS																														
<p><i>Pre-Plant, Pre-Emergence, At-Planting cont'd</i></p>	<p>For difficult-to-control weeds such as fall panicum, barnyardgrass, crabgrass, shattercane and broadleaf signalgrass up to 2 inches tall, and Pennsylvania smartweed up to 6 inches tall, apply this product at 1.5 pints (24.0 fl oz) per acre in these tank mixtures. For other labeled annual weeds, apply 18.0 to 24.0 fl oz of this product per acre when weeds are less than 6 inches tall, and 1.5 to 2.25 pints (24.0 to 36.0 fl oz) when weeds are over 6 inches tall.</p> <p>TANK MIXTURES:</p> <table border="0"> <tr> <td>Aim</td> <td>Firstrate</td> <td>Micro Tech Prowl</td> </tr> <tr> <td>Assure II Authority</td> <td>Flexstar</td> <td>Pursuit</td> </tr> <tr> <td>Boundry Canopy</td> <td>Frontline/Outlook</td> <td>Pursuit Plus Reflex</td> </tr> <tr> <td>Canopy XL</td> <td>Fusion</td> <td>Scepter</td> </tr> <tr> <td>Command Domain</td> <td>Gauntlet</td> <td>Sencor/Lexone</td> </tr> <tr> <td>Dual</td> <td>Intrro</td> <td>Squadron</td> </tr> <tr> <td>Dual II Magnum</td> <td>Linex</td> <td>Steel</td> </tr> <tr> <td></td> <td>Lorox/Linuron</td> <td>Valor</td> </tr> <tr> <td></td> <td>Lorox Plus</td> <td></td> </tr> <tr> <td></td> <td>Magnum</td> <td></td> </tr> </table>	Aim	Firstrate	Micro Tech Prowl	Assure II Authority	Flexstar	Pursuit	Boundry Canopy	Frontline/Outlook	Pursuit Plus Reflex	Canopy XL	Fusion	Scepter	Command Domain	Gauntlet	Sencor/Lexone	Dual	Intrro	Squadron	Dual II Magnum	Linex	Steel		Lorox/Linuron	Valor		Lorox Plus			Magnum		
Aim	Firstrate	Micro Tech Prowl																														
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Boundry Canopy	Frontline/Outlook	Pursuit Plus Reflex																														
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Dual II Magnum	Linex	Steel																														
	Lorox/Linuron	Valor																														
	Lorox Plus																															
	Magnum																															
<p>Spot treatment</p>	<p>For spot treatments, apply this product prior to initial pod set in soybeans.</p> <p>The crop receiving spray in the treated area will be killed.</p>	<p>Do not treat more than 10 percent of the total field area to be harvested.</p> <p>Do not spray or allow drift outside target area for the same reason.</p>																														
<p>Pre-harvest</p>	<p>This product provides weed control when applied prior to harvest of soybeans.</p> <p>Apply at rates given in the annual, perennial and woody brush tables.</p> <p>This product may be applied using either aerial or ground spray equipment.</p> <p>Apply after pods have set and lost all green color. Care should be taken to avoid excessive seed shatter loss due to ground application equipment.</p>	<p>Do not apply more than 3.75 quarts (120 fl oz) per acre of this product for pre-harvest applications.</p> <p>Do not apply more than 3.0 pints (48.0 fl oz) per acre of this product by air.</p> <p>Allow a minimum of 7 days between application and harvest of soybeans.</p> <p>Do not graze or harvest treated hay or fodder for livestock feed within 25 days of last pre-harvest application. (If the application rate is 1.5 pints (24.0 fl oz) per acre or lower, the grazing restriction is reduced to 14 days after the last pre-harvest application.)</p> <p>Do not apply to soybeans grown for seed.</p>																														
<p>Selective equipment</p>	<p>This product may be applied through shielded applicators, hooded sprayers, wiper applicators or sponge bars in soybeans.</p> <p>See the "Selective Equipment" part of the "<b>APPLICATION EQUIPMENT and TECHNIQUES</b>" section of this label for information on proper use and calibration of this equipment.</p>	<p>Allow at least 7 days between application and harvest.</p>																														

## 8.9 - Sugarcane

LABELED CROPS: Sugarcane

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.0  Pre-plant, Pre-emergence, At-planting	See Use Directions in Section 8.0  This product may be applied in or around sugarcane fields or in fields prior to the emergence of plant cane.	See Section 8.0  Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.
Spot Treatment	This product may be applied as a spot treatment in sugarcane. For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray to wet the foliage of vegetation to be controlled. Volunteer or diseased sugarcane should have at least 7 new leaves.  Avoid spray contact with healthy cane plants since severe damage or destruction may result.	Do not feed or graze treated sugarcane foliage following application.
Fallow treatments	This product may be used as a replacement for tillage in fields that are lying fallow between sugarcane crops. This product may also be used to remove the last stubble of ratoon cane. For removal of last stubble of ratoon cane, apply 3.0 to 3.75 quarts (96.0 to 120 fl oz) of this product in 10.0 to 40.0 gallons of water per acre to new growth having at least 7 new leaves.  Ground or aerial application equipment may be used. Applications up to 4.5 pints (72.0 fl oz) per acre may be made by aerial application in fallow sites where there is sufficient buffer to prevent injury due to drift onto adjacent crops. Tank mixtures with 2,4-D and dicamba may be used. It is the pesticide user's responsibility to ensure that all products are registered for the intended use.  Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.	Allow 7 or more days after application before tillage.
Hooded sprayers	This product may be used through hooded sprayers for weed control between the rows of sugarcane. See Section 7.0 for " <b>APPLICATION EQUIPMENT and TECHNIQUES</b> " for additional use directions. Minimize the potential for spray particles to escape from under the hood by operating the sprayer at appropriate ground speeds, nozzle pressures and wind speeds. Operation on rough or sloping ground may result in spray particles escaping from the hood.  When applying to sugarcane that is grown on raised beds, ensure that the hood is designed to completely enclose the spray. If necessary, extend the front and rear flaps of the hoods to reach the ground in furrows between the rows.  PRECAUTION: Droplets, mist, foam or splatter of the herbicide solution settling on the crop may result in discoloration, stunting or destruction.  To the extent consistent with applicable law, such damage shall be the sole responsibility of the applicator.	Do not allow treated weeds to come into contact with the crop.

## 8.9 - Sugarcane

LABELED CROPS: Sugarcane

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<p>FOR AID IN SUGARCANE RIPENING</p> <p>(FLORIDA, HAWAII, LOUISIANA, PUERTO RICO AND TEXAS)</p>	<p>This product is a foliar-applied plant growth regulator to hasten ripening and increase the level of sucrose in sugarcane. It is effective in both low and high- tonnage sugarcane.</p> <p>When applied as directed under the conditions described, this product will hasten ripening and extend the period of high sucrose level in sugarcane.</p> <p>As a result of leaf desiccation, improved trash burn can be expected.</p> <p>Most of the sucrose increase is concentrated in the top nodes of the treated cane stalk. In order to recover the maximum sugar where topping is practiced during harvest, top at the base of the fourth leaf.</p> <p>Prior to application, consult your state sugarcane authority or local Loveland Products, Inc. representative regarding the degree of sucrose response anticipated from the variety of sugarcane to be treated.</p> <p>APPLICATION RATES: Use the following application rates and timing instructions according to the State in which the sugarcane is grown.</p> <p>PRECAUTION: Application of this product may initiate development of shooting eyes. This product may not increase the sucrose content of sugarcane under conditions of good nature ripening. Within 2 to 3 weeks after application, this product may produce a slight yellowing to pronounced browning and drying of leaves, and a shortening of upper internodes. Spindle death may occur.</p> <p>Rainfall within 6 hours after application may reduce effectiveness.</p> <p>NOTE: Use the higher rate within the labeled range when treating sugarcane under adverse ripening conditions or when less responsive varieties are to be treated.</p> <p>FLORIDA - Apply 3.75 to 9.0 fl oz of this product per acre 3 to 6 weeks before harvest of LAST RATTON CANE ONLY.</p> <p>HAWAII - Apply 6.75 to 15.75 fl oz of this product per acre 4 to 10 weeks before harvest.</p> <p>LOUISIANA - Apply 2.6 to 9.0 fl oz of this product per acre 3 to 7 weeks before harvest of RATOON CANE ONLY.</p> <p>PUERTO RICO - Apply 3.75 fl oz of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.</p> <p>TEXAS - Apply 3.75 to 9.0 fl oz of this product per acre 3 to 5 weeks before harvest of RATOON CANE ONLY.</p>	<p>Do not make application to sugarcane grown for seed.</p> <p>Do not feed or graze treated sugarcane forage following application.</p> <p>Do not apply for enhanced ripening to any crops other than sugarcane.</p> <p>Do not plant subsequent crops in treated fields other than the following for 30 days after application: alfalfa or other forage legumes, beans (all types), corn (all types), cotton, melons (all types), pasture grasses, peanuts, potatoes (Irish or sweet), sorghum (milo), soybeans, squash (all types) or wheat.</p>

## 8.10 - Vegetable Crops

This "VEGETABLE CROPS" section gives directions that apply to all listed vegetable crops within section 8.10 grouped alphabetically below. See the individual crop categories for specific instructions, preharvest intervals, precautions and restrictions.

### TYPES OF APPLICATIONS

Chemical Fallow, Preplant Fallow Beds, Preplant, Preemergence, Prior to Transplanting Vegetables, At-Planting, Hooded Sprayers in Row Middles, Shielded Sprayers in Row Middles, Wiper Applications in Row Middles, and Post Harvest, Directed Applications (Non-Bearing Ginseng), Over-the-top Wiper Applications (Rutabagas Only).

### PRECAUTIONS

- When applying this product prior to transplanting or direct-seeding crops into plastic mulch, care must be taken to remove residues of this product, which could cause crop injury, from the plastic prior to planting.
- Residues can be removed by single 0.5-inch application of water, either by natural rainfall or via a sprinkler system. Care must be taken to insure that the wash water flushed off the plastic mulch and does not enter transplant holes.
- Applications made at emergence will result in injury or death to emerged seedlings.
- Apply before seed germination in coarse sandy soils to further minimize the risk of injury.
- Avoid contact of herbicide with foliage, green shoots or stems, bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.

### RESTRICTIONS

- When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid severe crop injury.
- In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles must be made prior to vine development to prevent severe injury or destruction.
- Unless otherwise specified in this product's labeling, treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.
- Post-harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.

See "Application Equipment and Techniques" section of this label for additional information.

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### 8.10.1 - Brassica Vegetables

LABELED CROPS: Broccoli, Broccoli (raab), Brussels sprouts, Cabbage, Cabbage (Chinese), Cabbage (Chinese mustard), Cauliflower, Cavalo broccolo, Chinese broccoli (gai lon), Chinese cabbage (bok choy and napa), Collards, Kale, Kohlrabi, Mizuna, Mustard greens, Mustard spinach, Rape greens

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0	See Section 8.10

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### 8.10.2 - Bulb Vegetables

LABELED CROPS: Garlic, Great-headed garlic, Leek, Onion (dry bulb and green), Shallot, Welsh onion, Shallot

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0	See Section 8.10

### 8.10.3 - Cucurbit Vegetables and Fruits

LABELED CROPS: Chayote (fruit), Chinese waxgourd, Citron melon, Cucumber, Gherkin, Gourds, Gourds (edible including hyotan, cucuzza, hechima, Chinese okra), Melons (All), Momordica spp. (includes balsam apple, balsam pear, bittermelon, Chinese cucumber), Muskmelon (cantaloupe, casaba, crenshaw, golden pershaw, honeydew, honey ball, mango melon and Persion, pineapple, Santa Claus, snake), Pumpkin, Summer Squash (including crookneck, scallop, straightneck, vegetable marrow, zucchini) Winter squash (including butternut, calabaza, hubbard, acorn, spaghetti), Watermelon

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0	For Cantaloupe, Casaba melon, Crenshaw melon, Cucumber, Gherkin, Gourds, Honeydew melon, Honey ball melon, Mango melon, Melons (all) Muskmelon, Persian melon, Pumpkin, Squash (summer and winter), AND Watermelon, allow at least 3 days between application and planting.

### 8.10.4 - Leafy Vegetables

LABELED CROPS: Amaranth (Chinese spinach), Arrugula (roquette), Beet greens, Cardoon, Celery, Celery (Chinese), Celtuce, Chaya, Chervil, Chrysanthemum (edible leaved), Chrysanthemum (Garland), Corn salad, Cress (garden and upland), Dandelion, Dock (sorrel), Dokudami, Endive (escarole), Fennel (Florence), Gow kee, Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Rhubarb, Spinach (All), Swiss Chard, Watercress (upland), Water Spinach

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0  For Watercress, avoid application within 3 days prior to seeding and during the period between seeding and emergence to minimize the risk of injury.	See Section 8.10

### 8.10.5 - Fruiting Vegetables

LABELED CROPS: Eggplant, Ground cherry (Physalis spp.), Pepino, Pepper (includes bell, chili, cooking, pimento, sweet), Tomatillo, Tomato

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0	See Section 8.10  For Eggplant, Ground cherry, Pepino, Pepper (all), Tomatillo and Tomato, allow at least 3 days between application and planting.  Do not use hooded or shielded sprayer applications in row middles of tomatoes.

### 8.10.6 - Legume Vegetables (succulent or dried)

LABELED CROPS: Bean (Lupinus: includes grain lupin, sweet lupin, white lupin, and white sweet lupin), Bean (Phaseolus: includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), Bean (Vigna: includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), Broad bean (fava), Chickpea (garbanzo), Guar, Jackbean, Lablab bean, Lentil, Pea (Pisum: includes dwarf pea, edible podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea), Pigeon pea, Soybean (immature seed), Sword bean

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0	See Section 8.10
Pre-harvest broadcast spray (Dry beans)	This product may be applied as an over the top broadcast spray to control labeled weeds prior to the harvest of dry beans. Apply up to 1.5 pints (24.0 fl oz) stage of the legume seed (30 percent grain moisture or less). Either ground broadcast or aerial applications may be made.	Apply at least 7 days before harvest for Dry Beans, Dry Peas, Lentils and Chickpeas.  Only make one application per year.  Do not combine a pre-harvest spray with a spot treatment on the same crop area.
Pre-harvest broadcast spray (Dry Peas, Lentils and Chickpeas)	This product may be applied as an over the top broadcast spray to control labeled weeds prior to the harvest of dry peas, lentils, and chickpeas. Apply up to 3.0 pints (48.0 fl oz) in 3.0 to 20.0 gallons of water per acre at the hard dough stage of the legume seed (30 percent grain moisture or less).  Either ground broadcast or aerial applications may be made.	Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.  Do not treat field (feed) peas, since these are considered to be grown as livestock feed.  Do not make pre-harvest applications to Dry Beans, Dry Peas, Lentils and Chickpeas grown for seed.
Spot treatment (Dry beans, Dry Peas, Lentils, Chickpeas)	This product may be applied as spot treatment to control troublesome weeds such as Canada thistle, quackgrass, mayweed (dog fennel), and milkweed in dry beans. Apply up to 19.5 fl oz in 10.0 to 20.0 gallons of water through ground spray equipment or use a 2 percent solution in a handheld sprayer. For best results, make applications at or beyond the bud stage of growth. The crop receiving spray in treated areas will be killed.	Apply at least 14 days before harvest  Only one application per year may be made.  Do not combine a pre-harvest spray with a spot treatment on the same crop area.  Do not feed treated vines and hay from these crops to livestock. Do not apply this product through any type of irrigation system.  Do not treat field cowpeas, since these are considered to be grown as livestock feed.

### 8.10.7 - Root and Tuber Vegetables

LABELED CROPS: Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Beet (garden), Burdock, Canna, Carrot, Cassava (bitter and sweet), Celeriac, Chayote (root), Chervil, Chicory, Chufa, Dasheen, Galangal, Ginger, Ginseng, Horseradish, Leren, Kava, Parsley, Parsnips, Potato (Irish), Radish, Radish (Oriental), Rutabaga, Salsify, Salsify (Black and Spanish), Skirret, Sweet potato, Tanier, Tumeric, Turnip, Wasabi, Yacon, Yams, Yam bean, Yam (True)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0	See Section 8.10
Direct Application (Non-bearing Ginseng)	This product may be used for weed control in established non-bearing ginseng. Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high volume wands, lances, and orchard guns or with wiper application equipment.  PRECAUTION: Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other parts of desirable plants. Contact of this product with other than matured brown bark can result in serious crop damage.	Applications must be made at least one year prior to harvest.
Over-the-Top Wiper Application (Rutabaga Only)	Wiper applicators may be used over-the-top of rutabagas.	Allow at least 14 days between application and harvest of rutabagas.

### 8.11 - Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar Beet (non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 8.10	See Use Directions under Section 8.0  Avoid contact of herbicide with foliage, green shoots or stems. Bark, exposed roots (including those emerging from plastic mulch), or fruit of crops because severe injury or destruction may result.	See Section 8.10  When making pre-emergence and at planting applications, applications must be made before crop emergence to avoid serious crop injury. Apply before seed germination in coarse sandy soils to further minimize the risk of injury. In crops with vines, hooded sprayer, shielded sprayer and wiper applications to row middles must be made prior to vine development.  Treatments with selective equipment including wipers and hooded sprayers must be made at least 14 days prior to harvest.  Post harvest or fallow applications must be made at least 30 days prior to planting any non-labeled crop.
Weed control, Site preparation	This product may be applied for weed control or for site preparation prior to planting or transplanting crops listed in this section.	Do not apply within a week before the first asparagus spears emerge. Do not feed or graze treated pineapple forage following application.

## 8.11 - Miscellaneous Crops

LABELED CROPS: Aloe vera, Asparagus, Bamboo shoots, Globe artichoke, Okra, Peanut (ground nut), Pineapple, Strawberry, Sugar Beet (non-Roundup Ready)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Weed control, Site preparation cont'd</i>	When applying this product prior to transplanting or direct seeding crops into plastic mulch, care must be taken to remove residues of this product from the plastic prior to transplanting. Residues can be removed by 0.5 inch natural rainfall or by applying water via a sprinkler system. Care must be taken to insure that the wash water flushes off the plastic mulch and does not enter transplant holes. Injury made at emergence will result in injury or death to emerged seedlings.	
Spot treatment (Asparagus)	This product may be applied immediately after cutting, but prior to the emergence of new spears.	Do not treat more than 10 percent of the total field area to be harvested.  Do not harvest within 5 days of treatment.
Post-harvest (Asparagus)	This product may be applied after the last harvest and all spears have been removed. If spears are allowed to re-grow, delay application until ferns have developed. Make delayed treatments as a directed or shielded spray in order to avoid contact of the spray with ferns, stems or spears.  Select and use recommended types of spray equipment for post-emergence postharvest applications. A directed spray is any application where the spray pattern is aligned in such a way as to avoid direct contact of the spray with the crop. A shielded spray is any application where a physical barrier is positioned and maintained between the spray and the crop to prevent contact of spray with the crop.	Do not allow direct contact of the spray with the asparagus which will result in serious crop injury.

## 9.0 - TREE, VINE, and SHRUB CROPS (Alphabetical)

This section gives directions that apply to all listed tree, vine and shrub crops within section 9.0 crop groups. Individual crops may have more specific instructions, pre-harvest intervals, precautions and restrictions.

### TYPES OF APPLICATIONS

Pre-plant (Site Preparation) Broadcast Sprays, Weed control, Middles (between rows of trees, vines or shrubs), Strips (within rows of trees, vines or shrubs), Selective Equipment (shielded sprayers, wiper treatments), Directed Sprays, Spot Treatments, Perennial Grass Suppression, Cut Stump.

Applications may be made with boom equipment, CDA, shielded sprayers, hand-held and high-volume wands, lances, orchard guns or with wiper applicator equipment, except as directed.

### USE DIRECTIONS

This product may be applied in middles (between rows of trees or vines), strips (within rows of trees or vines), and for weed control or perennial grass suppression in established tree fruit and tree nut groves, orchards, berries and vineyards. This product may also be used for site preparation prior to planting or transplanting these crops. Apply at 12.0 to 120 fluid ounces per acre according to the "Annual Weeds" and "Perennial Weeds" rate tables sections of this label. Utilize rates at the higher end of the labeled rate range when weeds are stressed, growing in dense populations or are greater than 12 inches tall. Repeat applications may be made up to a maximum of 7.8 quarts (250 fluid ounces) per acre per year.

The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate the application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

## PRECAUTIONS

- Extreme care must be exercised to avoid contact of herbicide solution, spray, drift or mist with foliage or green bark of trunk, branches, suckers, fruit or other part of the trees, canes and vines.
- Avoid applications when recent pruning wounds or other mechanical injury has occurred.
- Contact of this product other than matures brown bark can result in serious crop damage or destruction.
- For applications in strips (within rows of trees), only selective equipment (directed sprays, hooded sprayers, shielded applicators, or wipers) must be used to minimize the potential for leakage or drift of herbicide sprays onto crop.

See "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for additional directions and precautions.

## RESTRICTIONS

- Only wipers or shielded applicators capable of preventing all contact with crop may be used.
- Only shielded or directed sprayers may be used in crops with potential for crop contact, and then only where there is sufficient clearance.
- For berry crops, hooded or shielded sprayers must be fully enclosed including top, sides, front and back.
- Allow a minimum of 3 days between applications and transplanting.

Middles (between rows of trees, vines or bushes)

## USE DIRECTIONS

This product will control or suppress annual and perennial weeds and ground covers growing between the rows of labeled tree and vine crops. If weeds are under drought stress, irrigate prior to application. Reduced control may result if weeds have been mowed prior to application.

## TANK MIXTURES

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

A tank mixture of this product plus Goal® 2XL (or generic equivalent) may be used for annual weeds in middles between rows of citrus crops, tree fruits, tree nuts and vine crops. This mixture is recommended when weeds are stressed or growing in dense populations. 12.0 to 24.0 fluid ounces per acre of this product plus the labeled rate of Goal® 2XL will control annual weeds with a maximum height or diameter of 6 inches, including Crabgrass, Common groundsel, Junglerice, Common lambsquarters, Redroot pigweed, London rocket, Common ryegrass, Shepherdspurse, Annual sowthistle, Common cheeseweed (malva), Filaree (suppression), Horseweed/marestail (*Conyza canadensis*), Stinging nettle and Common purslane (suppression). 12.0 to 24.0 fluid ounces per acre of this product plus labeled rate of Goal® 2XL will control Common cheeseweed (malva) or Hairy fleabane (*Conyza bonariensis*), with a maximum height or diameter of 3 inches.

Strips (in rows of trees, vines or bushes)

## TANK MIXTURES

This product may be applied in rows of tree or vine crops and may also be tank mixed with the following products (or generic equivalent). It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

DEVRIOL® 50 DF	KARMEX® DF	PROWL®	SIMAZINE 80W	SULFLAN®AS
DIREX® 4L	KROVAR® I	PRINCEP® CALIBER 90	SIM-TROL™ 4L	SURFLAN® 75W
GOAL® 2XL	KROVAR® II	SIMAZINE 4L	SOLICAM® DF	

Restriction: Do not apply these tank mixtures in Puerto Rico.

## PERENNIAL GRASS SUPPRESSION

This product will suppress perennial grasses such as Bahiagrass, Bermudagrass, Tall fescue, Orchardgrass, Kentucky bluegrass, and Quackgrass that are grown as ground covers in tree and vine crops.

For suppression of Tall fescue, Fine fescue, Orchardgrass and Quackgrass, apply 6.0 fluid ounces of this product in 10.0 to 20.0 gallons of water per acre.

For suppression of Kentucky bluegrass covers, apply 4.5 fluid ounces of this product per acre. Do not add ammonium sulfate.

For best results, mow cool season grass covers in the spring to even their height and apply this product 3 to 4 days after mowing.

For suppression of vegetative growth and seedhead inhibition of Bahiagrass for approximately 45 days, apply 4.5 fluid ounces of this product in 10.0 to 25.0 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3.0 fluid ounces of this product per acre, followed by an application of 1.5 to 3.0 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

For burndown of Bermudagrass, apply 1.5 to 3.0 pints (24.0 to 48.0 fluid ounces) of this product in 3.0 to 20.0 gallons of water per acre. Use this treatment only if reduction of the Bermudagrass stand can be tolerated. When burndown is required prior to harvest, allow at least 21 days to ensure sufficient time for burndown to occur.

For suppression of Bermudagrass, apply 4.5 to 12.0 fluid ounces of this product per acre east of the Rocky Mountains and 12.0 fluid ounces of this product per acre west of the Rocky Mountains. Apply in a total spray volume of 3.0 to 20.0 gallons per acre, no sooner than 1 to 2 weeks after full green-up. If the Bermudagrass is mowed prior to application, maintain a minimum of 3 inches in height. Sequential applications up to the maximum labeled rate may be made when regrowth occurs and Bermudagrass injury and stand reduction can be tolerated. East of the Rocky Mountains, use rates of 4.5 to 7.5 fluid ounces per acre in shaded conditions or where a lesser degree of suppression is desired.

## 9.1 Cut Stumps (Tree crops)

### LABELED CROPS:

Citrus Trees: Calamondin, Chironja, Citron, Citrus hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (Tangerine), Orange (all), Pummelo, Tangelo, Tangor.

Fruit Trees: Apply, Apricot, Cherry (sweet, sour), Crabapple, Loquat, Mayhaw, Nectarine, Olive, Peach, Pear, Plum/Prune (all), Quince.

Nut Trees: Almond, Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia, Pecan, Pistachio, Walnut (black, English).

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Suitable Hand-held Equipment	<p>Cut stump applications of this product may be made during site preparation or site renovation, prior to transplanting tree crops. This product will control regrowth of cut stumps and resprouts of many types of tree species, some of which are listed below.</p> <p>Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly cut surface immediately after cutting. Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.</p> <p>PRECAUTION: Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.</p>	Do not make cut stump applications when the roots of adjacent desirable trees may be grafted to the roots of the cut stump. Injury resulting from root grating may occur in adjacent trees.

## 9.2 - Berry Crops

LABELED CROPS: Blackberry (including bingleberry, black satin berry, Boysenberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, Coryberry, Darrowberry, Dewberry, Dirksen thronless berry, Himalayaberry, Hullberry, Juneberry, Lavacaberry, Lowberry, Lucretiaberry, Marionberry, Nectarberry, Olallie berry, Oregon evergreen berry, Phenomenalberry, Rangeberry, Ravenberry, Rossberry, Shawnee blackberry, and Youngberry), Blueberry, Cranberry, Currant, Elderberry, Gooseberry, Huckleberry, Loganberry, Raspberry (Black, Red), Salal

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0	<p>See Section 9.0</p> <p>Do not permit herbicide solution to contact desirable vegetation, including green shoots, canes or foliage.</p> <p>Allow a minimum of 14 days between last application and harvest of labeled berry crops.</p> <p>Allow a minimum of 30 days between last application and harvest of cranberries.</p> <p>Do not make directed sprays within the cranberry bush areas prior to berry harvest.</p>
Spot Treatment (Cranberry production)	<p>May be used to control weeds growing in dry ditches (interior and perimeter) of cranberry production areas. Handheld sprayers or other appropriate application equipment listed under "<b>APPLICATION EQUIPMENT and TECHNIQUES</b>" in this label may be used. Drop water level to remove standing water in ditches prior to application. In hand-held sprayers, use 1 to 2 percent solution of this product. Spray to wet vegetation, not to run-off.</p> <p>For treatments after draw down of water in dry ditches, allow 2 or more days after treatment before reintroduction of water to achieve maximum weed control.</p> <p>Apply this product within 1 day after draw down to ensure application to actively growing weeds.</p> <p>Use nozzles that emit medium- to large-sized droplets to minimize drift in order to avoid crop injury.</p>	<p>Allow a minimum of 30 days between last application and harvest of cranberries.</p> <p>Do not apply this material through irrigation system. Do not make applications by air. Do not apply directly to water.</p>
Post-harvest (Cranberry Production)	<p>Best results will be obtained if applications are made to vines that appear dormant (after they have turned red). Hand-held sprayers, wipers or other appropriate application equipment listed under "<b>APPLICATION EQUIPMENT and TECHNIQUES</b>" in this label may be used. If using hand-held sprayers, use a 0.5 to 1 percent solution of this product.</p> <p>Spray to wet vegetation, not to run off. If using hand-held boom sprayers, apply 1.5 to 3.0 quarts (48.0 to 96.0 fl oz) of this product per acre.</p> <p><b>PRECAUTION:</b> Even though vines appear dormant, contact of the herbicide solution with desirable vegetation may result in damage or severe plant injury. Cranberry plants that are directly sprayed may be killed.</p>	<p>Do not treat more than 10 percent of the total bog.</p> <p>Allow a minimum of 6 months after the last application and next harvest of cranberries.</p> <p>Do not apply this product through the irrigation system. Do not make applications by air. Do not apply directly to water.</p> <p>Make applications only after cranberries have been harvested to control weeds growing within the field.</p>

### 9.3 - Citrus

LABELED CROPS: Calamondin, Chironja, Citron, Citrus Hybrids, Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (All), Pummelo, Satsuma Mandarin, Tangelo (ugli), Tangor

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	<p>See Use Directions under Section 9.0</p> <p>Florida and Texas only: For burn down or control of the weeds listed below, apply the labeled rates of this product in 3.0 to 40.0 gallons of water per acre. Where weed foliage is dense, use 10.0 to 30.0 gallons of water per acre.</p> <p>For goatweed, apply 1.5 to 2.25 quarts (48.0 to 72.0 fl oz) of this product per acre. Apply in 20.0 to 30.0 gallons of water per acre when plants are actively growing. Use 3.0 pints (48.0 fl oz) per acre when plants are less than 8 inches tall and 2.25 pints (72.0 fl oz) per acre when plants are greater than 8 inches tall. If goatweed is greater than 8 inches tall, the addition of Krovar<sup>®</sup> II or Karmex<sup>®</sup> may improve control.</p> <p>It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p>	<p>See Section 9.0</p> <p>Allow a minimum of 1 day between last application and harvest.</p> <p>For citron groves apply as directed sprays only.</p>

#### Glypho 648 Rate Per Acre (pint)

Perennial Weed	1.5 pints (24.0 fl oz)	1.5 quarts (48.0 fl oz)	2.25 quarts (72.0 fl oz)	3.75 quarts (120 fl oz)
Bermudagrass	B	-	PC	C
Guinea grass (Texas and Florida Ridge)	B	C	C	C
(Florida Flatwoods)	-	B	C	C
Paragrass	B	C	C	C
Torpedograss	S	-	PC	C
S=Suppression	B=Burndown	PC=Partial Control		C=Control

### 9.4 - Miscellaneous Tree Food Crops

LABELED CROPS: Cactus (fruits and pads), Palm (heart, leaves), Palm (oil)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0	See Section 9.0

## 9.5 - Non-Food Tree Crops

LABELED CROPS: Pine, Poplar, Eucalyptus, Christmas Trees, Other Non-food Tree Crops.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0	See Section 9.0
Directed sprays, Spot treatments, Wiper applications	<p>This product may be used as a post-directed spray and spot treatment around established poplar, eucalyptus, Christmas Trees and other non-food tree crops.</p> <p>PRECAUTION: Care must be exercised to avoid contact of spray drift or mist with foliage or green bark of established Christmas trees and other pine trees. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.</p>	Do not use this product as an over-the-top broadcast spray in Christmas trees and other pine tree.
Site Preparation	<p>This product may be used prior to planting non-food tree crops.</p> <p>Precautions must be taken to protect non-target plants during site preparations applications.</p>	
Directed Spray  (Eucalyptus and Poplar Production)	<p>This product can be used around established eucalyptus and poplar trees to control undesirable vegetation.</p> <p>Use a 1 to 2 percent spray solution to control herbaceous weeds in eucalyptus farms. Use a 2 percent spray solution for control of undesirable woody brush and trees. For "hard-to-control" weeds, use a 5 to 10 percent spray solution. Avoid contact of spray, drift, or mist with foliage, green bark or non-woody surface roots of plants.</p>	Do not allow herbicide spray to contact desirable vegetation.
Wiper Application  (Eucalyptus and Poplar Production)	<p>This product may be used through wick or other suitable wiper applicators for control or partial control of grass and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label. For wick applicators, mix 3.0 quarts (96.0 fl oz) of this product with 2.0 gallons water to make a 33% solution. For wiper systems that can handle thicker solutions, such as force-fed systems, a 33 to 100% solution may be used. For best results, ensure that the herbicide solution is allowed to contact the maximum amount of leaf surface. As weed densities increase, decrease equipment speed to allow sufficient herbicide flow to wet all weed surfaces contacted. Weeds not contacted will be unaffected.</p>	

## 9.6 - Pome Fruit

LABELED CROPS: Apple, Crabapple, Loquat, Mayhaw, Pear (including oriental pear), Quince

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0	<p>See Section 9.0</p> <p>Allow a minimum of 1 day between last application and harvest in pome fruits.</p>

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## 9.7 - Stone Fruit

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LABELED CROPS: Apricot, Cherry (Sweet, Tart), Nectarine, Olive, Peach, Pear, Plum/Prune (All types), Plumcot.

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TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0  Avoid application near trees with recent pruning wounds or other mechanical injury.	See Section 9.0  Allow a minimum of 17 days between last application and harvest in stone fruit crops.  For olive groves, apply as directed sprays only.

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### RESTRICTIONS ON APPLICATION EQUIPMENT:

For cherries, any application equipment listed in Section 9.0 may be used in all states.

Any application equipment listed in Section 9.0 may be used in apricots, nectarines, peaches and plums/prunes growing in Arizona, California, Colorado, Idaho, Kansas, Kentucky, New Jersey, North Dakota, Oklahoma, Oregon, Texas, Utah and Washington, except for peaches grown in the states specified in the following paragraph. In AK, AL, AR, CT, DE, FL, GA, HI, IA, IL, IN, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, NY, OH, PA, RI, SC, SD, TN, VA, VT, and WI, use wiper equipment only.

For Peaches grown in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee only, apply with a shielded boom spray or shielded wiper applicator, which prevents any contact of this product with the foliage or bark of trees. Apply no later than 90 days after first bloom. Applications made after this time may result in severe damage. Remove suckers and low hanging limbs at least 10 days prior to application. Apply only near trees that have been planted in the orchard for 2 or more years.

EXTREME CARE MUST BE TAKEN TO ENSURE NO PART OF THE PEACH TREE IS CONTACTED.

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## 9.8 - Tree Nuts

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LABELED CROPS: Almond, Beechnut, Betelnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Coconut, Filbert (Hazelnut), Hickory nut, Macadamia, Pecan, Pine nut, Pistachio, Walnut (Black, English)

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TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0	See Section 9.0  Allow a minimum of 3 days between last application and harvest of tree nuts, except coconut.  Allow 14 days between application and harvest in coconuts.

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## 9.9 - Tropical Crops and Subtropical Trees and Fruits

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LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados Cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Ilima, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

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TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0  This product may be applied for weed control or for site preparation prior to transplanting crops listed in this section.	See Section 9.0  Allow a minimum of 1 day between last application and harvest of banana, guava, papaya and plantain crops.

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## 9.9 - Tropical Crops and Subtropical Trees and Fruits

LABELED CROPS: Ambarella, Atemoya, Avocado, Banana, Barbados Cherry (acerola), Biriba, Blimbe, Breadfruit, Cacao (cocoa) bean, Canistel, Carambola (starfruit), Cherimoya, Coffee, Custard apple, Dates, Durian, Feijoa, Figs, Governor's plum, Guava, Ilima, Imbe, Imbu, Jaboticaba, Jackfruit, Longan, Lychee, Mamey apple, Mango, Mangosteen, Marmaladebox (genip), Mountain papaya, Papaya, Pawpaw, Plantain, Persimmon, Pomegranate, Pulasan, Rambutan, Rose apple, Sapodilla, Sapote (black, mamey, white), Spanish lime, Soursop, Star apple, Sugar apple, Surinam cherry, Tamarind, Tea, Ti (roots and leaves), Wax jambu.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	See Use Directions under Section 9.0	<p>Allow a minimum of 14 days between last application and harvest of any other tropical or subtropical tree fruit.</p> <p>Allow a minimum of 28 days between last application and harvest in coffee crops.</p> <p>In coffee and banana, delay applications 3 months after transplanting to allow the new coffee or banana plant to become established.</p>
Bananacide (Banana only)	<p>See Use Directions under Section 9.0</p> <p>This product may be used to destroy banana plants infected with the Banana Bunchy Top Virus as well as non-infected banana plants to establish a disease free buffers around plantations.</p> <p>Remove all fruit from the plants within the treatment area prior to treatment. Inject 1 mL of this product's concentrate per 2 to 3 inches of pseudostem diameter. Make the injection at least one foot above ground, except for very small plants, which should be injected vertically into the top. Any subsequent regrowth must also be destroyed. All plants and mats (or units) adjacent (within a 4-foot radius) to a treated mat shall be mechanically destroyed.</p> <p>For control of the Banana Bunchy Top Virus, it is critical that the grower follow a strict control program involving monitoring for diseased plants, spraying to control the aphid vector, and destruction of all infected mats (or units). An infected plant may not show symptoms of the disease for up to 125 days, therefore it is critical that the entire mat (or unit) containing the diseased plant be destroyed immediately.</p>	<p>See Section 9.0</p> <p>Do not apply more than 11.25 mL of this product's concentrate per mat (or units). Remove all fruit from plants and mats (or units) prior to treatment.</p> <p>Do not harvest any fruit or plant materials from treated mats (or units) following injection.</p> <p>Do not allow livestock to consume treated materials.</p> <p>Following transplant of new banana plants into treated areas, allow plants to become established for 3 months before applying this product for weed control.</p>

## 9.10 - Vine Crops

LABELED CROPS: Grapes (raisin, table, wine), Hops, Kiwi, Passion fruit

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
See Section 9.0	<p>See Use Directions under Section 9.0</p> <p>In the northeast and Great Lakes regions, applications must be made prior to the end of bloom stage of grapes to avoid injury, or make applications with shielded sprayers or wiper equipment.</p>	<p>See Section 9.0</p> <p>Allow a minimum of 14 days between last application and harvest.</p> <p>Do not use selective equipment in kiwi</p> <p>Applications must not be made when green shoots, canes or foliage are in the spray zone.</p>

## 10.0 - PASTURE GRASSES, FORAGE LEGUMES and RANGELANDS

### 10.1 - Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, Pre-emergence, At-Planting	<p>This product may be applied before, during or after planting crops listed.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p>	<p>If a single application is made at rates of 1.5 quarts (48.0 fl oz) per acre or less, no waiting period between treatment and feeding or grazing is required.</p> <p>If application rates greater than 1.5 quarts (48.0 fl oz) per acre are made, remove domestic livestock before application and wait 8 weeks after application before grazing or harvesting.</p>
Spot treatment, Over-the-Top Wiper applications  (Alfalfa and Clover only)	<p>This product may be applied as a spot treatment in alfalfa or clover. This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.</p> <p>Applications may be made in the same area at 30-day intervals.</p>	<p>For spot treatment and wiper applications, apply in areas where the movement of domestic livestock can be controlled.</p> <p>No more than one-tenth of any acre can be treated at one time.</p> <p>Remove domestic livestock before application and wait 14 days after application before grazing livestock or harvesting.</p>
Dormant (Alfalfa Only)	<p>This product will control or suppress many weeds including quackgrass, downy brome and cheatgrass in dormant alfalfa. Apply 6.0 to 9.0 fl oz per acre of this product. Apply in the spring to alfalfa that is dormant. Make applications after spring temperatures have warmed enough to encourage resumption of weed growth, but prior to initiation of trifoliolate leaf expansion of the alfalfa. Applications made after expansion of the first trifoliolate leaf of the alfalfa will cause growth reduction and reduced crop yield.</p> <p>Slight discoloration of the alfalfa may occur, but the alfalfa will regreen and regrow under moist soil conditions as effects of this product wear off.</p> <p>PRECAUTION: Application of this product can cause crop injury.</p>	<p>Do not use ammonium sulfate when spraying dormant alfalfa with this product.</p> <p>Do not use this product where a slight yield reduction in the first cutting of alfalfa cannot be tolerated.</p> <p>Do not make more than one application per year.</p> <p>Allow 36 hours after application before grazing livestock or harvesting.</p>
Pre-harvest (Alfalfa Only)	<p>This product may be used in declining alfalfa stands or any stand of alfalfa where crop destruction is acceptable. This application will severely injure or destroy the stand of alfalfa. This product will control annual and perennial weeds including Quackgrass, when applied prior to the harvest of Alfalfa.</p> <p>Use up to 1.5 pints (24.0 fl oz) of this product per acre. Applications may be made at any time of the year. For control of Quackgrass, apply in the spring, late summer or fall when Quackgrass is actively growing. Treatments for Quackgrass must be followed by deep tillage for complete control.</p>	<p>Make only one application to an existing stand of Alfalfa per year.</p> <p>Do not apply more than 1.5 quarts (48.0 fl oz) of this product per acre as a pre-harvest treatment.</p> <p>Do not use for alfalfa grown for seed.</p> <p>Wait 36 hours before treated crop and weeds can be harvested and fed to livestock.</p>

### 10.1 - Alfalfa, Clover, and Other Forage Legumes

LABELED CROPS: Alfalfa, Clover, Kenaf, Kudzu, Lespedeza, Leucaena, Lupin, Sainfoin, Trefoil, Velvet bean, Vetch (all types)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Renovation	<p>This product may be applied as a broadcast spray to existing stands of Alfalfa, Clover, and other labeled forage legumes. Labeled crops may be planted into the treated area.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds and Wood Brush and Trees Rate Tables in this label.</p>	<p>Remove domestic livestock before application.</p> <p>If application rates of 1.5 quarts (48.0 fl oz) per acre or less are used wait 36 hours after application before grazing or harvesting.</p> <p>If application rates greater than 1.5 quarts (48.0 fl oz) per acre are used, wait 8 weeks after application before grazing or harvesting.</p>

### 10.2 - Conservation Reserve Program (CRP)

LABELED CROPS: Conservation Reserve Program (CRP) Acres

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Renovation (rotating out of CRP), Site preparation	<p>This product may be used to prepare CRP land for crop production. Refer to Federal, state or local use guides for CRP renovation recommendations.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds and Wood Brush and Trees Rate Tables in this label.</p> <p>PRECAUTION: Some stunting of CRP perennial grasses will occur if broadcast applications are made when plants are not dormant.</p>	<p>Do not apply more than 2.25 quarts (72.0 fl oz) per acre per year onto CRP grasses.</p> <p>For any crop not listed in the "CROPS" sections of this label applications must be made at least 30 days prior to planting.</p>
Post-emergence Weed control in Dormant Acres, Over-the-Top Wiper Application	<p>This product may be used to suppress competitive growth and seed production of undesirable vegetation in CRP acres. Such applications may be made with wiper application equipment or as a broadcast or spot treatment to dormant CRP grasses. For selective applications with broadcast spray equipment, apply 9.0 to 12.0 fl oz of this product per acre in early spring before desirable CRP grasses, such as crested and tall Wheatgrass, break dormancy and initiate green growth. Late fall applications can be made after desirable perennial grasses have reached dormancy.</p>	

### 10.3 - Grass or Turfgrass Seed Production

LABELED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS"

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, Pre-emergence, Renovation, Site preparation	<p>This product may be applied before, during, or after planting or for renovation of turf or forage grass areas grown for seed production.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds and Wood Brush and Trees Rate Tables in this label.</p>	<p>Do not disturb soil or underground plant parts before treatment. Tillage or renovation techniques such as vertical mowing, coring or slicing must be delayed for 7 days after application to allow proper translocation into underground plant parts.</p>

### 10.3 - Grass or Turfgrass Seed Production

LABELED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS"

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<p><i>Pre-plant, Pre-emergence, Renovation, Site preparation cont'd</i></p>	<p>Applications must be made prior to the emergence of the crop to avoid injury.</p> <p>For maximum control of existing vegetation, delay planting to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses, such as Bermudagrass, summer or fall applications provide best control.</p>	<p>If application rates total 2.25 quarts (72.0 fl oz) per acre or less, no waiting period between treatment and feeding or livestock grazing is required.</p> <p>If the rate is greater 2.25 quarts (72.0 fl oz) per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.</p>
<p>Shielded Sprayer</p>	<p>Apply 24.0 to 72.0 fl oz of this product as a broadcast spray in 10.0 to 20.0 gallons of total spray volume per acre. Uniform planting in straight rows aid in shielded sprayer applications. Best results are obtained when the grass seed crop is small enough to easily pass by or through the protective shields.</p> <p>PRECAUTION: Contact of this product in any manner to any vegetation to which treatment is not intended may cause damage.</p> <p>To the extent consistent with applicable law, grower assumes all responsibility for crop losses from misapplication.</p>	
<p>Over-the-Top Wiper Applications</p>	<p>This product may be applied with wiper applicators to control or suppress the weeds listed under "WIPER APPLICATORS" in the "SELECTIVE EQUIPMENT" section of this label.</p> <p>Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators must be adjusted so that the wiper contact point is at least 2 inches above the desirable vegetation.</p> <p>Weeds should be a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when weed height varies so that not all weeds are contacted. In these instances, repeat treatments up to the maximum application rate may be necessary. Better results may be obtained if 2 applications are made in opposite directions.</p>	
<p>Spot treatments</p>	<p>Use a 1 to 1.5 percent solution</p> <p>Apply this product prior to heading of grasses.</p>	<p>The crop receiving the spray in the treated area will be killed. Do not allow drift or spray outside of the target area for the same reason.</p>

### 10.3 - Grass or Turfgrass Seed Production

LABELED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS"

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Creating Rows in Annual Ryegrass	<p>Use 12.0 to 24.0 fl oz of this product per acre. Use the higher rate when the ryegrass is greater than 6 inches tall. Best results are obtained when applications are made before the ryegrass reaches 6 inches in height.</p> <p>PRECAUTION: Set nozzle height to allow the establishment of the desired row spacing while preventing spray droplets, spray fines, or drift to contact the ryegrass plants not treated. Use low-pressure nozzles, or drop nozzles designed to target the application over a narrow band.</p> <p>To the extent consistent with applicable law, grower assumes all responsibility for crop losses from misapplication.</p>	

### 10.4 - Pastures

LABELED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS". Including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuygrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot treatment, Over-the Top Wiper Applications	<p>This product may be applied as a spot treatment or with wiper applicators in pastures.</p> <p>Applications may be made in the same area at 30-day intervals.</p> <p>For spot treatments or wiper application methods using rates of 2.25 quarts (72.0 fl oz) per acre or less, the entire field or any portion of it may be treated.</p>	<p>When spot treatment or wiper applications are made using rates above 2.25 quarts (72.0 fl oz) per acre, no more than 10 percent of the total pasture may be treated at any one time.</p> <p>Remove domestic livestock before application and wait 7 days after application before grazing livestock or harvesting.</p>
Pre-plant, Pre-emergence, Pasture renovation, Stand Removal	<p>This product may be applied prior to planting or emergence of forage grasses. In addition, this product may be used to control perennial pasture species listed on this label prior to re-planting.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds and Wood Brush and Trees Rate Tables in this label.</p>	<p>If application rates total 2.25 quarts (72.0 fl oz) per acre or less, no waiting period between treatment and feeding or livestock grazing is required.</p> <p>If the rate is greater than 2.25 quarts (72.0 fl oz) per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.</p>
Chemical Mowing (Bermudagrass Pastures Prior To Spring Growth Or Immediately After First Cutting)	<p>This product may be applied at 12.0 fl oz per acre to control the weeds listed below and most other winter annual grass and broadleaf weeds in established coastal Bermudagrass pastures.</p> <p>Annual bluegrass, Cheat, Crabgrass, Henbit, Johnsongrass seedling, Little barley, Oats, Ryegrass, Sandbur field, Wheat, Wild mustard</p> <p><u>Applications prior to spring growth:</u> Apply this product in the late winter or early spring but before new coastal Bermudagrass growth begins in the spring.</p>	<p>Labeled application rates totaling 2.25 quarts (72.0 fl oz) per acre or less do not require a waiting period between treatment and feeding or livestock grazing.</p> <p>If the rate is greater than 2.25 quarts (72.0 fl oz) per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.</p> <p>Only make one application per year to treated fields.</p>

## 10.4 - Pastures

LABELED CROPS: Any grass (Gramineae family) except corn, sorghum, sugarcane and those listed under "CEREAL CROPS". Including Bahiagrass, Bermudagrass, Bluegrass, Brome, Fescue, Guineagrass, Kikuygrass, Orchardgrass, Pangola grass, Ryegrass, Timothy, Wheatgrass

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
	<p>Applications to new growth can damage the Bermudagrass.</p> <p><u>Applications following the first cutting:</u> Apply this product after the first Bermudagrass cutting when the Bermudagrass has not yet begun to regrow. Applications made after regrowth has begun can damage the Bermudagrass.</p>	<p>Do not make a spring application prior to growth and an application following the first cutting on the field during the same year.</p>

### STATE SPECIFIC DIRECTIONS FOR PASTURES

Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming Only

**Bromus Species:** This product may be used to treat downy brome (*Bromus tectorum*), Japanese brome (*Bromus japonicus*), soft chess (*Bromus mollis*) and cheatgrass (*Bromus secalinus*) found in industrial, rangeland and pasture sites. Apply 6.0 to 12.0 fluid ounces of product per acre on a broadcast basis. For best results, coincide applications with early seedhead emergence of the most mature plants. Delaying the application until this growth stage will maximize the emergence of other weedy grass flushes. Applications should be made to the same site each year until seed banks are depleted and the desirable perennial grasses are able to become reestablished on the site.

**Medusahead:** To treat Medusahead, apply 12.0 fluid ounces of this product per acre as soon as plants are actively growing, and prior to the 4 leaf stage. Applications may be made in the fall or spring.

**Application Equipment and Techniques:** Applications may be made using ground or aerial equipment. Aerial applications for these uses may be made using fixed wing or helicopter equipment. For aerial applications, apply in 2.0 to 10.0 gallons of water per acre. For applications using ground equipment, apply in 10.0 to 20.0 gallons of water per acre.

When applied as directed there are no grazing restrictions.

## 10.5 - Rangelands

LABELED CROPS: Rangeland (Perennial cool and warm season grass rangelands)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Post-emergence	<p>This product will control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands.</p> <p>Preventing viable seed production is key to the successful control and invasion of annual grassy weeds in rangelands. Follow-up applications in sequential years should eliminate most of the viable seeds.</p> <p>Delay grazing of treated areas to encourage growth of desirable perennials. Allowing desirable perennials to flower and reseed in the treated area will encourage successful transition.</p> <p>Apply 9.0 to 12.0 fl oz per acre to control or suppress many annual weeds growing in perennial cool and warm-season grass rangelands including Downy brome, Cheat grass, Cereal rye and Jointed goatgrass.</p>	<p>Do not use ammonium sulfate when spraying rangeland grasses with this product.</p> <p>Do not apply more than 2.25 quarts (72.0 fl oz) per acre per year.</p>

## 10.5 - Rangelands

LABELED CROPS: Rangeland (Perennial cool and warm season grass rangelands)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Post-emergence cont'd</i>	<p>Apply when most mature brome plants are in early flower and before the plants, including seedheads, turn color. Allowing for secondary weed flushes to occur in the spring following rain events further depletes the seed reserve and encourage perennial grass conversion on weedy sites. Fall applications are possible, and recommended, where spring moisture is usually limited and fall germination allows for good weed growth.</p> <p>For Medusahead, apply 12.0 fl oz per acre at the 3-leaf stage. Delaying applications beyond this stage will result in reduced or unacceptable control. Fire may be useful in eliminating the thatch layer produced by slow decaying culms prior to application. Allow new growth to occur before spraying after a burn.</p> <p>Slight discoloration of the desirable grasses may occur, but they will regreen and regrow under moist soil conditions as effects of this product wear off.</p>	

## 10.6 - Turf Grass Sod Production

LABELED CROPS: Turfgrass for Sod

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, Pre-emergence, Renovation, Site Preparation	<p>This product controls most existing vegetation prior to renovating turf grass areas or establishing turf grass grown for sod. Broadcast of hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds and Wood Brush and Trees Rate Tables in this label.</p> <p>Desirable turfgrasses may be planted following the above procedures.</p>	<p>If application rates total 2.25 quarts (72.0 fl oz) per acre or less, no waiting period between treatment and feeding or livestock grazing is required. If the rate is greater than 2.25 quarts (72.0 fl oz) per acre, remove domestic livestock and wait 8 weeks following application before grazing or harvesting.</p> <p>Do not disturb soil or underground plant before treatment. Tillage or renovation techniques such as vertical mowing, coring, or slicing must be delayed for 7 days after application to allow translocation into underground plant parts.</p>

## 10.6 - Turf Grass Sod Production

LABELED CROPS: Turfgrass for Sod

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot treatment	Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turf grass	
Turfgrass Renovation for sod production	<p>This product controls most existing vegetation prior to renovating turfgrass areas or establishing turfgrass grown for seed or sod. For maximum control of existing vegetation, delay planting or sodding to determine if any regrowth from escaped underground plant parts occurs. Where repeat treatments are necessary, sufficient regrowth must be attained prior to application. For warm-season grasses such as Bermudagrass, summer or fall applications provide the best control. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray.</p> <p>Delay tillage or renovation techniques such as vertical mowing, coring or slicing for 7 days after application to allow translocation into underground plant parts.</p> <p>Desirable turfgrass may be planted following the above procedures.</p> <p>Hand-held equipment may be used for spot treatment of unwanted vegetation growing in existing turfgrass. Broadcast or hand-held equipment may be used to control sod remnants or other unwanted vegetation after sod is harvested.</p>	<p>Do not feed or graze turfgrass grown for seed or sod production for 8 weeks following application.</p> <p>Do not disturb soil or underground plant parts before treatment.</p>

## 10.7 - Release of Bermudagrass or Bahiagrass

Dormant applications:

This product may be used to control or partially control many winter annual weeds and tall fescue for effective release of dormant Bermudagrass or Bahiagrass. Treat only when turf is dormant and prior to spring greenup. This product may also be tank-mixed with Oust® for residual control. Tank mixtures of this product with Oust® may delay greenup. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

For best results on winter annuals, treat when plants are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is at or beyond the 4 to 6-leaf stage.

Apply 6.0 to 48.0 fluid ounces of this product per acre alone or in a tank mixture with the labeled rate of Oust®. Apply the labeled rates in 10.0 to 40.0 gallons of water per acre. Use only in areas where Bermudagrass or Bahiagrass are desirable ground covers and where some temporary injury or discoloration can be tolerated.

### Actively growing Bermudagrass:

This product may be used to control or partially control many annual and perennial weeds for effective release of actively growing Bermudagrass. Apply 12.0 to 36.0 fluid ounces of this product in 10.0 to 40.0 gallons of spray solution per acre. Use the lower rate when treating annual weeds below 6 inches in height (or runner length). Use the higher rate as weeds increase in size or as they approach flower or seedhead formation. These rates will also provide partial control of the following perennial species:

Bahiagrass	Bluestem, silver	Fescue, tall	Johnsongrass	Trumpetcreeper	Vaseygrass
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This product may be tank-mixed with Oust®. If tank-mixed, use no more than 12.0 to 24.0 fluid ounces of this product with the labeled rate of Oust® per acre. These rates will also provide partial control of the following perennial weeds:

Bahiagrass	Bluestem, silver	Broomsedge	Dallisgrass	Dock, curley	Dogfennel
Fescue, tall	Johnsongrass	Poorjoe	Trumetcreeper	Vaseygrass	Vervain, blue

### RESTRICTIONS

- Use only on well-established bermudagrass.
- Bermudagrass injury may result from the treatment, but regrowth will occur under moist conditions.
- Do not repeat applications of the tank mix in the same season since severe injury may occur.

### Actively growing bahiagrass

For suppression of vegetative growth and seedhead inhibition of Bahiagrass for approximately 45 days, apply 4.5 fluid ounces of this product in 10.0 to 40.0 gallons of water per acre. Apply 1 to 2 weeks after full green-up or after mowing to a uniform height of 3 to 4 inches. This application must be made prior to seedhead emergence.

For suppression up to 120 days, apply 3.0 fluid ounces of this product per acre, followed by an application of 1.5 to 3.0 fluid ounces per acre about 45 days later. Make no more than 2 applications per year.

A tank mixture of this product plus Oust® may be used. Apply 4.5 fluid ounces of this product plus the labeled rate of Oust® per acre 1 to 2 weeks following an initial spring mowing. Make only one application per year.

## 11.0 - ROUNDUP READY® CROPS

The following instructions or those separately published on Loveland Products, Inc. Supplemental labeling include all applications which can be made onto the specified Roundup Ready crops during the complete cropping season. Do NOT combine these instructions with those listed for crop varieties that do not contain the Roundup Ready gene, in the "ANNUAL AND PERENNIAL CROPS (ALPHABETICAL)" section of this label.

THIS PRODUCT IS TO BE USED FOR POSTEMERGENCE APPLICATION ONLY ON CROP VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE OR GLYPHOSATE TOLERANT GENE.

Applying this product to crop varieties that are not designated as glyphosate tolerant will result in severe crop injury and yield loss. Avoid contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain a Roundup Ready or glyphosate tolerant gene, since severe injury or destruction will result.

The Roundup Ready designation indicates that the crop variety contains a patented gene that provides tolerance to this product. Information on Roundup Ready crop varieties may be obtained from your seed supplier. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

NOTE: Roundup Ready seed, and the method of selectivity controlling weeds using glyphosate on a Roundup Ready crop, are protected under several U.S. Patents. A license to use Roundup Ready seed must be obtained prior to use.

For Ground Applications with broadcast equipment, apply this product in 5.0 to 20.0 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment use flat spray nozzles. Check for even distribution of spray droplets.

For Aerial Applications apply this product in 3.0 to 15.0 gallons of water per acre. See the "**APPLICATION EQUIPMENT and TECHNIQUES**" section of this label for procedures to avoid spray drift that may cause injury to any vegetation not intended for treatment. Use of appropriate buffer zones will help prevent injury to adjacent vegetation.

**ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS WHICH DO NOT CONTAIN A GLYPHOSATE TOLERANT GENE.**

See the "MIXING and APPLICATION EQUIPMENT AND TECHNIQUES" sections of this label for additional directions and restrictions on the application of this product.

To prevent crop injury, tank mixtures with other herbicides, insecticides, fungicides, micronutrients or fertilizers may result in reduced weed control or crop injury and are not recommended for over-the-top applications of this product unless otherwise specified in this product label, or supplemental labeling published separately by Loveland Products, Inc.

Ammonium sulfate may be mixed with this product for applications to Roundup Ready crops. Refer to the "MIXING" section for USE DIRECTIONS for ammonium sulfate.

Sprayer Preparation: It is important that sprayer and mixing equipment be clean and free of pesticide residue before making applications of this product. Follow the cleaning procedures specified on the label of the product(s) previously used. **THOROUGHLY CLEAN THE SPRAY TANK AND ALL LINES AND FILTERS TO ELIMINATE POTENTIAL CONTAMINATION FROM OTHER HERBICIDES PRIOR TO MIXING AND APPLYING THIS PRODUCT.**

NOTE: The following use directions are based on a clean start at planting by using a burndown application or tillage to control existing weeds before crop emergence. In no-till and stale seedbed systems, use a preplant burn-down treatment of this product to control existing weeds prior to crop emergence. Some weeds, such as black nightshade, broadleaf signalgrass, sicklepod, Texas panicum, sandbur, annual morningglory, woolly cupgrass, shattercane, wild proso millet, burcucumber, and giant ragweed with multiple germination times or suppressed (stunted) weeds may require a second application of this product for complete control. Make the second application after some regrowth has occurred and at least 10 days after a previous application of this product.

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### **11.1- Roundup Ready Alfalfa**

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FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene, which provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

<b>TYPES OF APPLICATIONS</b>	<b>USE DIRECTIONS</b>	<b>RESTRICTIONS</b>
Pre-plant, At-planting, Pre-emergence and Post-emergence	<p>This product will control many troublesome emerged weeds with over-the-top applications in Roundup Ready alfalfa.</p> <p>For ground applications with broadcast equipment, apply this product in 3.0 to 40.0 gallons of spray solution per acre. Carefully select proper nozzle and spray pressure to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.</p> <p>For aerial application: Use the labeled rates of this product in 3.0 to 15.0 gallons of spray solution per acre.</p>	<p>Do not exceed 3.0 pints (48.0 fl oz) of this product per acre when making applications by air.</p> <p>Any single over-the-top application of this product must not exceed 3.0 pints (48.0 fl oz) per acre. Sequential applications of this production must be at least 7 days apart.</p> <p>The combined total per year for all in-crop applications in newly established and established stands must not exceed 4.5 quarts (144 fl oz) per acre.</p> <p>Remove domestic livestock before application and wait a minimum of 5 days after last application before grazing, or cutting and feeding of Roundup Ready alfalfa forage and hay.</p>

## 11.1- Roundup Ready Alfalfa

FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene, which provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS								
<p><i>Pre-plant, At-planting, Pre-emergence and Post-emergence cont'd</i></p>	<p><b>New Stand Establishment (seeding year)</b> Prior to First Cutting During New Stand Establishment:</p> <table border="1"> <tr> <td>From emergence up to 4 trifoliolate leaves</td> <td>3.0 pints (48.0 fl oz) per acre</td> </tr> <tr> <td>From 5 trifoliolate leaves up to 5 days before first cutting</td> <td>3.0 pints (48.0 fl oz) per acre</td> </tr> </table> <p>After First Cutting in Newly Established Stands:</p> <table border="1"> <tr> <td>In-crop application, per cutting, up to 5 days before cutting</td> <td>3.0 pints (48.0 fl oz) per acre</td> </tr> </table> <p><b>Established Stands (non-seeding year)</b></p> <table border="1"> <tr> <td>In-Crop applications, per cutting, up to 5 days before cutting</td> <td>3.0 pints (48.0 fl oz) per acre</td> </tr> </table> <p>During stand establishment, due to the biology and breeding constraints of alfalfa, up to 10% of the seedlings may not contain the Roundup Ready gene and will not survive after the first application of this product. To eliminate the undesirable effects of stand gaps created by the loss of plants not containing a Roundup Ready gene, apply a single application of at least 1.5 pints (24.0 fl oz) per acre of this product at or before the 3 to 4 trifoliolate growth stage.</p> <p>In both newly seeded and established stands, in order to maximize yield and quality potential of forage and hay, make applications of this product after weeds have emerged but before alfalfa growth or re-growth interferes with application spray coverage of the target weeds.</p> <p>In addition to those weeds listed in the Glypho 648 herbicide label booklet, this product will suppress or control the parasitic weed, Dodder (<i>Cuscuta</i> spp.) in Roundup Ready alfalfa. Repeat applications may be necessary for complete control.</p>	From emergence up to 4 trifoliolate leaves	3.0 pints (48.0 fl oz) per acre	From 5 trifoliolate leaves up to 5 days before first cutting	3.0 pints (48.0 fl oz) per acre	In-crop application, per cutting, up to 5 days before cutting	3.0 pints (48.0 fl oz) per acre	In-Crop applications, per cutting, up to 5 days before cutting	3.0 pints (48.0 fl oz) per acre	
From emergence up to 4 trifoliolate leaves	3.0 pints (48.0 fl oz) per acre									
From 5 trifoliolate leaves up to 5 days before first cutting	3.0 pints (48.0 fl oz) per acre									
In-crop application, per cutting, up to 5 days before cutting	3.0 pints (48.0 fl oz) per acre									
In-Crop applications, per cutting, up to 5 days before cutting	3.0 pints (48.0 fl oz) per acre									
<p>Over-the-top applications</p>	<p>This product may be applied post-emergence to Roundup Ready alfalfa from emergence until 5 days prior to cutting. Any single over-the-top applications of this product must not exceed 3.0 pints (48.0 fl oz) per acre.</p>	<p>Sequential applications of this production must be at least 7 days apart.</p> <p>Tank mixtures with other herbicides, insecticides, or fungicides may result in crop injury or reduced weed control and must not be used for over-the-top applications of this product.</p>								

## 11.1- Roundup Ready Alfalfa

FOR POSTEMERGENCE APPLICATION ONLY ON ALFALFA VARIETIES DESIGNATED AS CONTAINING A ROUNDUP READY GENE.

The Roundup Ready designation indicates that the alfalfa contains a patented gene, which provides tolerance to this product. Information on Roundup Ready alfalfa varieties may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Over-the-top applications cont'd</i>	ATTENTION: Where Roundup Ready alfalfa is grown with a companion or cover crop, or is over seeded with a second species, over-the-top applications of this product will eliminate the non-Roundup Ready species.	

### MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all applications, including pre-plant during year of establishment	5.8 quarts (186 fl oz) per acre
Combined total per year for in-crop applications for newly established and established stands	4.5 quarts (144 fl oz) per acre
Pre-plant, At-planting and Pre-emergence single applications	3.0 pints (48.0 fl oz) per acre

## 11.2 - Roundup Ready Canola (Spring Varieties)

LABELED CROPS: Roundup Ready spring canola is defined as those Roundup Ready canola varieties that are seeded in the spring and harvested in the fall and do not enter a winter dormancy period.

Do not use this product on spring canola with a Roundup Ready gene planted in the following states: Alabama, Delaware Florida, Georgia, Kentucky, Maryland, New Jersey, North Carolina, South Carolina, Tennessee, Virginia and West Virginia, except for uses in wildlife food plots that will not be for human or livestock food.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, At-Planting, Pre-emergence	This product may be applied before, during or after planting Roundup Ready spring canola.	Maximum quantity of this product that may be applied for all pre-plant, at-planting and pre-emergence applications combined is 3.0 pints (48.0 fl oz) per season.
Post-emergence (In-crop)	<p>This product may be applied post-emergence to Roundup Ready spring canola from emergence through the 6-leaf stage of development. Applications made during bolting or flowering may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.</p> <p><u>Single Application</u> - 8.25 to 12.0 fl oz of this product per acre no later than the 6-leaf stage for the control of annual weeds. Avoid overlapping applications as this may result in temporary yellowing, delayed flowering, and or growth reduction. Similar crop injury may result when applications of more than 8.25 fl oz per acre are applied after the 4-leaf stage.</p> <p><u>Sequential Application</u> - Apply 8.25 fl oz of this product per acre to 1- to 3-leaf canola followed by a sequential application at a minimum interval of 10 days, but no later than the 6-leaf stage. Sequential applications can be made for early emerged annual weeds and perennial weeds such as Canada thistle and Quackgrass, or when multiple applications are needed for adequate weed control.</p>	<p>No more than two in-crop (over-the-top) broadcast applications may be made from crop emergence through the 6-leaf stage of development and the total of all in-crop applications must not exceed 16.5 fl oz of this product per acre.</p> <p>Allow a minimum of 60 days between last application and canola harvest.</p>

## 11.2 - Roundup Ready Canola (Spring Varieties)

### MAXIMUM ALLOWABLE APPLICATION RATES

Total of all Pre-plant, At Planting, Pre-emergence applications	3.0 pints (48.0 fl oz) per acre
Total of all In-crop applications from emergence to 6-leaf stage	1.5 pints (24.0 fl oz) per acre

## 11.3 - Roundup Ready Canola (Fall and Winter Varieties)

LABELED CROPS: Roundup Ready winter canola is defined as those Roundup Ready canola varieties that are seeded in early fall and harvested the following spring or summer. Winter canola varieties are intended to enter a cold period dormancy in the winter.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, At-Planting, Pre-emergence	This product may be applied before, during or after planting Roundup Ready winter canola.	Maximum quantity of this product that may be applied for all pre-plant, at-planting and pre-emergence applications combines is 3.0 pints (48.0 fl oz) per acre per season.
Post-emergence (In-crop)	<p>This product may be applied to Roundup Ready winter canola varieties from emergence to canopy closure in the fall and prior to bolting in the spring. Applications made during or after bolting may result in crop injury and yield loss. To maximize yield potential, make applications early to eliminate competing weeds.</p> <p>Some weeds with multiple germination times, or suppressed (stunted) weeds, or weeds that have overwintered may require sequential applications of this product for control. Make the second application after some re-growth has occurred and at least 60 days after a previous application of this product.</p> <p><u>Single Application</u> - Apply 16.5 to 24.0 fl oz of this product per acre in the fall. Make applications in the fall when weeds are small and actively growing. Use the higher rate in the labeled range when weed densities are high, when weeds have overwintered or when weeds become large and well established. Applications of greater than 12.0 fl oz per acre prior to the 6-leaf stage may result in reduced crop growth in the fall. Avoid overlaps. Spray overlaps may result in temporary yellowing and/or growth reduction.</p> <p><u>Sequential Applications</u> - Apply 12.0 to 24.0 fl oz of this product per acre to 2-leaf or larger canola in the fall, followed by a sequential application at the same rate and at a minimum interval of 60 days, but before bolting in the spring. Sequential applications can be made for early emerging annual weeds and winter emerging weeds such as Downy brome, Jointed goatgrass and Ryegrass, and for weeds that have overwintered. This product will control or suppress most of perennial weeds. For some perennial weeds, sequential applications may be required to reduce competition with the crop.</p>	<p>No more than two over-the-top broadcast applications may be made from crop emergence up to the onset of bolting, and the total in-crop application must not exceed 3.0 pints (48.0 fl oz) of this product per acre.</p> <p>Allow a minimum of 60 days between last application and harvest of canola grain.</p> <p>No waiting period is required between application and open grazing of livestock.</p>

### 11.3 - Roundup Ready Canola (Fall and Winter Varieties)

#### MAXIMUM ALLOWABLE APPLICATION RATES

Total of all Pre-plant, At Planting, Pre-emergence applications	3.0 pints (48.0 fl oz) per acre
Total of all In-crop applications from emergence to canopy closure or prior to bolting in the spring	3.0 pints (48.0 fl oz) per acre

### 11.4 - Roundup Ready Corn

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, Pre-emergence, At-Planting	<p>This product may be applied alone or in a tank-mixture before, during or after planting corn.</p> <p><b>TANK MIXTURES:</b> This product may be tank mixed with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, Lariat, Lasso or Micro-Tech at 50 to 100 percent of labeled rate. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>If less than the maximum rates of the above listed residual products were used in pre-plant and pre-emergence treatment then apply a post-emergence (in-crop) application of this product for maximum weed control.</p> <p>Avoid drift. Extreme care must be used when applying this product to prevent injury to desirable plants and crops which do not contain glyphosate tolerant gene.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p>	<p>Do not apply this product to crop varieties that are not designated as glyphosate tolerant.</p> <p>Do not allow contact with foliage, green stems, or fruit of crops, or any desirable plants that do not contain a Roundup Ready or glyphosate tolerant gene, since severe injury or destruction will result.</p> <p>Avoid drift. Extreme care must be used when applying this product to prevent injury to desirable plants and crops which do not contain a glyphosate tolerant gene.</p> <p>See the "Mixing and Application Equipment and Techniques" sections of this label for additional directions and restrictions on the application of this product.</p>
Post-emergence (in-crop)	<p>When applied as directed, this product controls labeled annual grass and broadleaf weeds in Roundup Ready corn. Many perennial grasses and broadleaf weeds will be controlled or suppressed with one or more application of this product. The post-emergent application of 18.0 to 36.0 fl oz per acre of this product should be made before the weeds reach a height and/or density that the weeds become competitive with the crop, generally 4 inch tall weeds or less.</p> <p>This product may be applied over-the-top to Roundup Ready corn from emergence through the V8 stage (8 leaves with collars) or until corn height reaches 48 inches, whichever comes first.</p> <p>Use drop nozzles when corn height is 24 to 30 inches (free standing), for optimum spray coverage and weed control.</p>	<p>Single in-crop applications of this product are not to exceed 2.25 pints (36.0 fl oz) per acre.</p> <p>The maximum combined total of multiple in-crop applications from emergence through the 48-inch stage is 4.5 pints (72.0 fl oz) per acre.</p> <p>Allow a minimum of 10 days between in-crop applications of this product.</p> <p>Allow a minimum of 50 days between application of this product and harvest of corn forage.</p>

## 11.4 - Roundup Ready Corn

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS									
<p><i>Post-emergence (in-crop) cont'd</i></p>	<p>For corn heights 30 to 48 inches (free standing), apply this product ONLY using ground application equipment with drop nozzles adjusted to avoid spraying into the whorls of the corn plants.</p> <p>If product is applied to whorls of corn, plant injury and yield reduction can occur.</p> <p>Maximum single in-crop application rate of this product up to 48-inch corn is 2.25 pints (36.0 fl oz) per acre.</p> <p>See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.</p> <p>TANK MIXTURES: This product may be applied in tank mixture with Bullet, Degree, Degree Xtra, Harness, Harness Xtra, Harness Xtra 5.6L, and Micro-Tech at 50 to 100 percent of labeled rate. This product may be applied in tank mixture with Permit and Atrazine at labeled rates. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>Tank-mix Partner</p> <table> <tr> <td>Degree</td> <td>Harness Xtra</td> <td>Micro-Tech*</td> </tr> <tr> <td>Degree Xtra</td> <td>Harness Xtra 5.6L</td> <td>Atrazine</td> </tr> <tr> <td>Harness</td> <td>Bullet*</td> <td></td> </tr> </table> <p>* Bullet and Micro-Tech are not registered for use as a post-emergence application in Texas.</p>	Degree	Harness Xtra	Micro-Tech*	Degree Xtra	Harness Xtra 5.6L	Atrazine	Harness	Bullet*		
Degree	Harness Xtra	Micro-Tech*									
Degree Xtra	Harness Xtra 5.6L	Atrazine									
Harness	Bullet*										
<p>Pre-Harvest</p>	<p>In Roundup Ready corn, up to 1.5 pints (24.0 fl oz) per acre of this product can be applied pre-harvest. Make applications at 35 percent grain moisture or less. Ensure that maximum kernel fill is complete and the corn is physiologically mature (black layer formed).</p>	<p>Allow a minimum of 7 days between application and harvest.</p>									
<p>Post-Harvest</p>	<p>This product may be applied after harvest of corn. A 2.25 pints (36.0 fl oz) per acre rate may be required for control of large weeds that were growing in the crop at the time of harvest. Tank mixtures with 2,4-D or dicamba may be used.</p>	<p>Allow a minimum of 7 days between treatment and harvest or feeding of treated vegetation.</p>									

## 11.4 - Roundup Ready Corn

### MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all applications	6.0 quarts (192 fl oz) per acre
Total of all Pre-plant, Pre-emergence, At-Planting applications	3.75 quarts (120 fl oz) per acre
Total in-crop applications from emergence through 48-inch corn	4.5 pints (72.0 fl oz) per acre
Maximum single in-crop application rate up to 48-inch corn	2.25 pints (36.0 fl oz) per acre
Maximum pre-harvest application rate after maximum kernel fill is complete and the crop is physiologically mature (black layer formation) until 7 days before harvest	1.5 pints (24.0 fl oz) per acre

## 11.5 - Roundup Ready Cotton

Use of this product in accordance with label directions is expected to result in normal growth of Roundup Ready cotton. However, various environmental conditions, agronomic practices and other factors make it impossible to eliminate all risks associated with this product, even when application are made in conformance with the label specifications. In some cases, these factors can result in boll loss, delayed maturity and/or yield loss.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, Pre-emergence, At-planting	<p>This product may be applied before, during or after planting cotton.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.</p>	
Post-emergence (Over-the-Top)	<p>This product may be applied by aerial or ground application equipment at rates up to 1.5 pints (24.0 fl oz) per acre per application post-emergence to Roundup Ready cotton from the ground cracking stage until the 4-leaf (node) stage of development (until the fifth true leaf reaches the size of a quarter). Over-the-top applications made after the 4-leaf (node) stage of development may result in boll loss, delayed maturity and/or yield loss.</p> <p>Salvage Treatment. This treatment may be used after the 4-leaf stage of development and must only be used where weeds threaten to cause the loss of the crop. 1.5 pints (24.0 fl oz) per acre may be applied either as an over-the-top applications or as a post-directed treatments sprayed higher on the cotton plants and over the weeds.</p> <p>Salvage treatments will result in significant boll loss, delayed maturity and/or yield loss.</p> <p>See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.</p>	<p>The combined total application of this product from cotton emergence until harvest must not exceed 4.5 quarts (144 fl oz) per acre.</p> <p>No more than two over-the-top broadcast applications may be made from crop emergence through the 4-leaf (node) stage of development.</p> <p>No more than two applications may be made from the 5-leaf stage through layby sequential in-crop over-the-top or post-directed applications of this product must be at least 10 days apart and cotton must have at least two nodes of incremental growth between applications. Allow a minimum of 7 days between application and harvest.</p> <p>Do not apply more than one salvage treatment per growing season.</p>
Selective Equipment	<p>This product may be applied using precision post-directed or hooded sprayers at rates up to 1.5 pints (24.0 fl oz) per acre per application to Roundup Ready cotton through layby. At this stage, post-directed</p>	<p>See the "SELECTIVE EQUIPMENT" part of the "APPLICATION EQUIPMENT AND TECHNIQUES" section of this label for information on proper use and calibration of this equipment.</p>

## 11.5 - Roundup Ready Cotton

Use of this product in accordance with label directions is expected to result in normal growth of Roundup Ready cotton. However, various environmental conditions, agronomic practices and other factors make it impossible to eliminate all risks associated with this product, even when application are made in conformance with the label specifications. In some cases, these factors can result in boll loss, delayed maturity and/or yield loss.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Selective Equipment cont'd</i>	<p>equipment must be used which directs the spray to the base of the cotton plants.</p> <p>Avoid contact of the spray with cotton leaves to the maximum extent possible. To minimize spray onto the leaves of the cotton plants, place nozzles in a low position directing a horizontal spray pattern under the cotton leaves to contact weeds in the row, and maintain low spray pressure (less than 30 psi). For best results, make applications while weeds are small (less than 3 inches).</p>	
Pre-harvest	<p>This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready cotton after 20 percent boll crack. Up to 3.0 pints (48.0 fl oz) of this product may be applied using either aerial or ground spray equipment.</p> <p>Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.</p> <p>TANK MIXTURES: This product may be tank mixed with DEF™ 6, Folex™, Ginstar, or Prep™ (or generic equivalents). It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>Refer to manufacturers labels for use of additives (such as surfactants, stickers and spreaders) for preharvest application to cotton.</p> <p>This product will not enhance the performance of these harvest aids when applied to Roundup Ready cotton.</p>	Allow a minimum of 7 days between application and harvest of cotton.

### MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all applications	6.0 quarts (192 fl oz) per acre
Total of all Pre-plant, Pre-emergence, At-Planting applications	3.75 quarts (120 fl oz) per acre
Total in-crop applications from ground cracking to layby	3.0 quarts (96.0 fl oz) per acre
Maximum pre-harvest application rate	1.5 quarts (48.0 fl oz) per acre

## 11.6 - Roundup Ready® Flex Cotton

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, Pre-emergence, At-planting	<p>This product may be applied before, during or after planting Roundup Ready Flex cotton. Always plant into a weed free seedbed. In no-till and stale seedbed systems, always burn down existing weeds before cotton emerges.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.</p>	
Post-emergence (Over-the- Top)	<p>When applied in accordance with this label, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready Flex cotton. To maximize yield potential spray cotton early to eliminate competing weeds. Many perennial weeds will be controlled or suppressed with one or more applications of this product.</p> <p>In-crop application rates above 1.5 pints (24.0 fl oz) per acre made alone or with the addition of other crop chemical products containing surfactant may cause a crop response including leaf speckling or leaf necrosis.</p> <p>Make an initial application of 1.5 pints (24.0 fl oz) per acre on 1 to 3 inch tall annual grass and broadleaf weeds. This product may be applied by ground application equipment at rates up to 2.25 pints (36.0 fl oz) per acre per application post- emergence to Roundup Ready Flex cotton. In addition to broadcast applications, post-directed equipment may be used to achieve weed coverage.</p> <p>Application after 10<sup>th</sup> leaf or 10<sup>th</sup> node may result in plant injury and yield loss.</p> <p>NOTE: For specific rates of application and instructions, refer to the "ANNUAL WEEDS" and "PERENNIAL WEEDS RATE SECTION" in the label booklet for Glypho 648 herbicide.</p>	<p>The maximum rate for any single in-crop application of this product is 2.25 pints (36.0 fl oz) per acre made using ground application equipment.</p> <p>Except for pre-harvest use, do not exceed a maximum rate of 1.5 pints (24.0 fl oz) per acre of this product when making applications by air.</p> <p>Between layby and 60 percent open bolls, the maximum combined total rate of this product that may be applied is 3.0 pints (48.0 fl oz) per acre.</p> <p>The maximum combined total of all applications made from crop emergence through 60 percent open bolls must not exceed 144 fl oz (4.5 quarts) per acre.</p>
Pre-harvest	<p>This product may be applied for pre-harvest annual and perennial weed control as a broadcast treatment to Roundup Ready Flex cotton after 60 percent boll crack. Up to 3.0 pints (48.0 fl oz) of this product may be applied using either aerial or ground spray equipment.</p>	<p>Allow a minimum of 7 days between application and harvest of cotton.</p> <p>Do not apply this product to cotton grown for seed, as a reduction in germination or vigor may occur.</p>

## 11.6 - Roundup Ready® Flex Cotton

ATTENTION: USE OF THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS IS EXPECTED TO RESULT IN NORMAL GROWTH OF ROUNDUP READY COTTON, HOWEVER, VARIOUS ENVIRONMENTAL CONDITIONS, AGRONOMIC PRACTICES AND OTHER FACTORS MAKE IT IMPOSSIBLE TO ELIMINATE ALL RISKS ASSOCIATED WITH THIS PRODUCT, EVEN WHEN APPLICATIONS ARE MADE IN CONFORMANCE WITH THE LABEL SPECIFICATIONS. IN SOME CASES, THESE FACTORS CAN RESULT IN BOLL LOSS, DELAYED MATURITY AND/OR YIELD LOSS.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Pre-harvest cont'd</i>	NOTE: This product will not enhance the performance of harvest aids when applied to Roundup Ready Flex cotton.	The use of additives, other than those listed on this label, for preharvest application to cotton is prohibited.

### MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all applications (Calculate the combined rate to be used for all pre-plant, in-crop and pre-harvest applications)	6.0 quarts (192 fl oz) per acre
Total of all Pre-plant, At-planting, Pre-emergence applications	3.75 quarts (120 fl oz) per acre
Total in-crop applications from ground cracking to 60 percent open bolls	4.5 quarts (144 fl oz) per acre
Maximum allowed from 60 percent bolls open to 7 days prior to harvest	1.5 quarts (48.0 fl oz) per acre

## 11.7 - Roundup Ready Soybeans

The use of this product for in-crop applications over Roundup Ready Soybeans may not be practiced in California unless the applicator has at the time of application a California approved supplemental label specifying the accepted directions for use.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Ore-plant, Pre-emergence, At-planting	This product may be applied before, during or after planting soybeans. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.  See the "ROUNDUP READY CROPS" section of this label for precautionary instructions for use in Roundup Ready crops.	
Post-emergence (In-Crop)	When applied as directed, this product will control labeled annual grasses and broadleaf weeds in Roundup Ready soybeans. Applications of this product can be made in Roundup Ready soybeans from emergence (cracking) throughout flowering. Refer to the "ANNUAL WEEDS RATE TABLE" in this label for specific rates on various annual weeds.  Make an initial application of 1.5 pints (24.0 fl oz) per acre on 2- to 8-inch tall weeds for best results. Weeds will generally be 2 to 8 inches tall, 2 to 5 weeks after planting. If the initial application is delayed and weeds are larger, apply a higher rate of this product. This product may be used up to 3.0 pints (48.0 fl oz) per acre in any single in-crop application for control of annual weeds and where heavy weed densities exist.  A 1.5 to 3.0 pints (24.0 to 48.0 fl oz) per acre per acre rate (single or multiple applications) of this product will control or suppress perennial weeds such as: Bermudagrass, Canada thistle, Common milkweed, Field bindweed, Hemp dogbane, Horsenettle, Maretail (horseweed), Nutsedge, Quackgrass, Rhizome johnsongrass, Redvine, Trumpetcreeper, Swamp smartweed and Wirestem muhly. For best results, allow perennial weed species to achieve at least 6 inches of growth	The combined total application from crop emergence through harvest must not exceed 4.5 pints (72.0 fl oz) per acre The maximum rate for any single in-crop application is 3.0 pints (48.0 fl oz) per acre per acre.  The maximum combined total of this product that can be applied during flowering is 3.0 pints (48.0 fl oz) per acre.

## 11.7 - Roundup Ready Soybeans

The use of this product for in-crop applications over Roundup Ready Soybeans may not be practiced in California unless the applicator has at the time of application a California approved supplemental label specifying the accepted directions for use.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Post-emergence (In-Crop) cont'd</i>	<p>before spraying with this product.</p> <p>Under adverse growing conditions such as drought, hail, wind damage or a poor soybean stand that slows or delays canopy closure, a sequential application of this may be necessary to control late flushes of weeds. In the Southern States, a sequential application of this product will be required to control new flushes of weeds in the Roundup Ready Soybean crop. To control giant ragweed, apply up to 1.5 pints (24.0 fl oz) per acre of this product when the weed is 8 to 12 inches tall to increase control and possibly avoid the need for a sequential application.</p>	

## 11.8 - Roundup Ready® Sugar Beets

The Roundup Ready designation indicates that the sugar beet contains a patented gene, which provides tolerance to this product. Information on Roundup Ready sugarbeet may be obtained from your seed supplier or Loveland Products, Inc. representative. Roundup Ready crop varieties must be purchased from an authorized licensed seed supplier.

Do NOT combine these instructions with those listed for crop varieties that do not contain a Roundup Ready gene listed in the "ANNUAL AND PERENNIAL CROPS (Alphabetical)" sections of the Glypho 648 herbicide label booklet.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Pre-plant, At-Planting, Pre-emergence	<p>This product may be applied before, during or after planting of Roundup Ready sugar beets.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p>	Maximum quantity of this product that may be applied for all pre-plant, at-planting and pre-emergence applications combined is 3.75 quarts (120 fl oz) per acre per season.
Post-emergence (In-crop)	This product may be applied over the top of Roundup Ready sugar beets for control of annual grasses and broadleaf weeds from emergence to 30 days prior to harvest. To maximize yield potential, spray sugar beets early to eliminate competing weeds. Up to 4 sequential applications of this product may be made with at least 10 days between applications. This product will control or suppress most perennial weeds. For some perennial weeds, repeat applications may be required to eliminate crop competition throughout the growing season.	<p>The combined total application from crop emergence through harvest must not exceed 6.75 pints (108 fl oz) per acre.</p> <p>The maximum rate for any single application between emergence to the 8 leaf stage is 2.25 pints (36.0 fl oz) per acre.</p> <p>The maximum rate for any single application between the 8 leaf stage and canopy closure is 1.5 pints (24.0 fl oz) per acre.</p> <p>Allow a minimum of 30 days between last application and sugar beet harvest.</p>

### MAXIMUM ALLOWABLE APPLICATION RATES

Combined total per year for all application	6.0 quarts (192 fl oz) per acre
Total of all Pre-plant, Pre-emergence applications	7.5 pints (120 fl oz) per acre
Emergence to 8 leaf stage	3.75 pints (60.0 fl oz) per acre
Between 8 leaf stage and canopy closure	3.0 pints (48.0 fl oz) per acre

## 12.0 - NON-CROP USES AROUND THE FARMSTEAD

### 12.1 - Weed Control and Trim-And-Edge

LABELED SITES: Non-crop Areas including building foundations, along and in fences, in dry ditches and canals, along ditchbanks, farm roads, shelterbelts, prior to landscape plantings and equipment storage areas.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS																											
Any suitable application equipment described in the APPLICATION EQUIPMENT and TECHNIQUES section of this label	<p>This product may be used to control annual weeds, perennials weeds and woody brush which are found in any part of the farmstead.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>TANK MIXTURES: This product may be tank mixed with the following products (or generic equivalents). Refer to these product labels for approved farmstead sites and application rates. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>For annual weeds, use 1.5 pints (24.0 fl oz) per acre of this product when weeds are less than 6 inches tall and 2.25 pints (36.0 fl oz) per acre when weeds are greater than 6 inches tall. For perennial weeds, apply 1.5 to 3.75 quarts (48.0 to 120 fl oz) per acre in these tank mixes.</p> <p>For tank mixtures with these products through backpack sprayers, handguns or other high-volume spray-to-wet applications, see the "HAND-HELD OR HIGH VOLUME EQUIPMENT" section of this label for allowable application rates.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">Arsenal</td> <td style="width: 33%;">Oust</td> <td style="width: 33%;">Sahara</td> </tr> <tr> <td>Barricade</td> <td>Pendulum 3.3</td> <td>Simazine</td> </tr> <tr> <td>65WG Diuron</td> <td>EC</td> <td>Surflan</td> </tr> <tr> <td>Endurance</td> <td>Pendulum</td> <td>Elar</td> </tr> <tr> <td>Escort</td> <td>WDG</td> <td>Vanquish</td> </tr> <tr> <td>Karmex DF</td> <td>Plateau</td> <td>2,4-D</td> </tr> <tr> <td>Krovar DF</td> <td>Princep DF</td> <td></td> </tr> <tr> <td></td> <td>Princep Liquid</td> <td></td> </tr> <tr> <td></td> <td>Ronstar 50 WP</td> <td></td> </tr> </table>	Arsenal	Oust	Sahara	Barricade	Pendulum 3.3	Simazine	65WG Diuron	EC	Surflan	Endurance	Pendulum	Elar	Escort	WDG	Vanquish	Karmex DF	Plateau	2,4-D	Krovar DF	Princep DF			Princep Liquid			Ronstar 50 WP		Do not apply this product with dicamba tank mixtures by air in California.
Arsenal	Oust	Sahara																											
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65WG Diuron	EC	Surflan																											
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Karmex DF	Plateau	2,4-D																											
Krovar DF	Princep DF																												
	Princep Liquid																												
	Ronstar 50 WP																												
	<p>For control or partial control of the following perennial weeds, apply 1.5 to 3.0 pints (24.0 to 48.0 fl oz) of this product plus the labeled rate of Oust® per acre.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">Bahigrass</td> <td style="width: 50%;">Fescue, tall</td> </tr> <tr> <td>Bermudagrass</td> <td>Johnsongrass</td> </tr> <tr> <td>Broomsedge</td> <td>Poorjoe</td> </tr> <tr> <td>Dallisgrass</td> <td>Quackgrass</td> </tr> <tr> <td>Dock, curly</td> <td>Vaseygrass</td> </tr> <tr> <td>Dogfennel</td> <td>Vervain, blue</td> </tr> </table>	Bahigrass	Fescue, tall	Bermudagrass	Johnsongrass	Broomsedge	Poorjoe	Dallisgrass	Quackgrass	Dock, curly	Vaseygrass	Dogfennel	Vervain, blue																
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## 12.2 - Greenhouse/Shadehouse

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Spot Spray, Directed Spray	<p>This product may be used to control weeds in and around greenhouses and shadehouses.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p>	<p>Air circulation fans must be turned off during application.</p> <p>Desirable vegetation must not be present during application.</p>

## 12.3 - Chemical Mowing

LABELED USES: Farm Ditches and Other Parts of Farmsteads

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Any suitable application equipment described in the APPLICATION EQUIPMENT and TECHNIQUES section of this label	<p>This product will suppress perennial grasses listed in this section to serve as a substitute for mowing. Use 6.0 fl oz of this product per acre when treating Tall fescue, Fine fescue, Orchardgrass or Quackgrass covers. Use 4.5 fl oz of this product per acre when treating Kentucky bluegrass. Use 12.0 fl oz of this product when treating Bermudagrass. Use 3.0 pints (48.0 fl oz) of this product when treating Torpedograss or Paragrass. Apply treatments in 10.0 to 20.0 gallons of spray solution per acre.</p>	Use only in areas where some temporary injury or discoloration of perennial grasses can be tolerated.

## 12.4 - Cut Stumps

LABELED USES: Cut Stumps (on any non-crop site listed on this label)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS												
Suitable Hand-Held Equipment	<p>This product will control regrowth of cut stumps and resprouts of many types of woody brush and tree species, some of which are listed below. Apply this product using suitable equipment to ensure coverage of the entire cambium. Cut trees or resprouts close to the soil surface. Apply a 50 to 100 percent solution of this product to the freshly-cut surface immediately after cutting.</p> <p>Delays in application may result in reduced performance. For best results, make applications during periods of active growth and full leaf expansion.</p> <p>Some sprouts, stems, or trees may share the same root system. Adjacent trees having a similar age, height and spacing may signal shared roots. Whether grafted or shared, injury is likely to occur to non-treated stems/trees when one or more trees sharing common roots are treated.</p> <table> <tr> <td>Alder</td> <td>Pepper, brazilian</td> <td>Sweetgum</td> </tr> <tr> <td>Eucalyptus</td> <td>Pine, Austrian</td> <td>Tan oak</td> </tr> <tr> <td>Madrone</td> <td>Reed, giant</td> <td>Willow</td> </tr> <tr> <td>Oak</td> <td>Salt cedar</td> <td></td> </tr> </table>	Alder	Pepper, brazilian	Sweetgum	Eucalyptus	Pine, Austrian	Tan oak	Madrone	Reed, giant	Willow	Oak	Salt cedar		
Alder	Pepper, brazilian	Sweetgum												
Eucalyptus	Pine, Austrian	Tan oak												
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Oak	Salt cedar													

## 12.5 - Habitat Management

LABELED USES: Habitat Restoration and Maintenance, Wildlife Food Plots

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<p>Any suitable application equipment described in the APPLICATION EQUIPMENT and TECHNIQUES of this label</p>	<p>This product may be used to control exotic and other undesirable vegetation in habitat management and natural areas including rangeland and wildlife refuges. Applications can be made to allow recovery of native plant species, prior to planting desirable native species, and for similar broad spectrum vegetation control requirements in habitat management areas.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>Spot treatments can be made to selectively remove unwanted plants for habitat maintenance and enhancement.</p> <p>This product may be used as a site preparation treatment to control annual and perennial weeds prior to planting wildlife food plots. Any wildlife food species may be planted after applying this product, or native species may be allowed to repopulate the area.</p>	<p>If tillage is needed to prepare a seedbed, wait 7 days after application before tillage to allow translocation into underground plant parts.</p>

## 13.0 - FORESTRY, INDUSTRIAL, TURF and ORNAMENTAL

### 13.1 - Forestry Site Preparation

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<p>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, And Similar Equipment.</p>	<p>This product can be used for the control or partial control of woody brush, trees and herbaceous weeds in forestry, as well as for use in preparing or establishing wildlife openings with these sites and maintaining logging roads.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>This product can be used in site preparation prior to planting any tree species, including Christmas trees, Eucalyptus, hybrid tree cultivars and silvicultural nursery sites.</p> <p>Use higher rates of this product within the labeled range for control or partial control of woody brush, trees and hard-to-control perennial herbaceous weeds. For best results, apply to actively growing woody brush and trees after full leaf expansion and before fall color and leaf drop. Increase rates within the labeled range for control of perennial herbaceous weeds any time after emergence and before seedheads, flowers or berries appear.</p> <p>Use the lower rates of this product within the labeled range for control of annual herbaceous weeds and actively growing perennial herbaceous weeds after seedheads, flowers or berries appear. Apply to the foliage of actively growing annual herbaceous weeds any time after emergence.</p>	<p>Do not apply this product as an over-the-top broadcast spray for forestry conifer or hardwood release.</p>

### 13.1 - Forestry Site Preparation

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS								
<p><i>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, And Similar Equipment cont'd</i></p>	<p><b>TANK MIXTURES:</b> Tank mixtures of this product may be used to increase the spectrum of vegetation controlled. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>Any labeled rate of this product may be used in a tank mix with the following products (or generic equivalents) for forestry site preparation.</p> <table border="0"> <tr> <td>Arsenal Applicators Concentrate</td> <td>Garlon 4A</td> </tr> <tr> <td>Chopper</td> <td>Landmark XP</td> </tr> <tr> <td>Escort or Escort XP</td> <td>Oust or Oust XP</td> </tr> <tr> <td>Garlon 3A</td> <td>Westar</td> </tr> </table> <p>For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands or tough-to-control woody brush and trees, use the higher labeled rates.</p>	Arsenal Applicators Concentrate	Garlon 4A	Chopper	Landmark XP	Escort or Escort XP	Oust or Oust XP	Garlon 3A	Westar	
Arsenal Applicators Concentrate	Garlon 4A									
Chopper	Landmark XP									
Escort or Escort XP	Oust or Oust XP									
Garlon 3A	Westar									

### 13.2 - Noncrop Areas and Industrial Sites

LABELED USES: Non-crop areas including airports, apartment complexes, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, dry ditches, dry canals, fencerows, gold courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreational areas, residential areas, rights-of-way, roadsides, schools, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management areas.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<p>This product may be applied with any suitable application equipment described in APPLICATION EQUIPMENT and TECHNIQUES section of this label.</p>	<p>This product may be used to trim-and-edge around objects in non-crop sites, for spot treatment of unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting an areas to ornamentals, flowers, turfgrass (sod or seed), or prior to laying asphalt or beginning construction projects.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>Repeated applications of this product may be used, as weeds emerge, to maintain bare ground.</p> <p><b>TANK MIXTURES:</b> This product may be tank mixed with the following products (or generic equivalents) provided that the specific product is registered for use on the target site. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the</p>	<p>Do not apply this product with dicamba tank mixtures by air in California.</p>

### 13.2 - Noncrop Areas and Industrial Sites

LABELED USES: Non-crop areas including airports, apartment complexes, commercial sites, Conservation Reserve Program (CRP) areas, ditch banks, dry ditches, dry canals, fencerows, gold courses, greenhouses, industrial sites, landscape areas, lumber yards, manufacturing sites, municipal sites, natural areas, office complexes, ornamentals, parks, parking areas, pastures, petroleum tank farms and pumping installations, plant nurseries, public areas, railroads, rangeland, recreational areas, residential areas, rights-of-way, roadsides, schools, sports complexes, storage areas, substations, turfgrass areas, utility sites, warehouse areas, and wildlife management areas.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS																																												
<p><i>13.2 Cont'd:</i> This product may be applied with any suitable application equipment described in APPLICATION EQUIPMENT and TECHNIQUES section of this label.</p>	<p>applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <table border="0"> <tr><td>Arsenal</td><td>Outrider®</td></tr> <tr><td>atrazine</td><td>pendimethalin</td></tr> <tr><td>Barricade 65WG</td><td>Plateau</td></tr> <tr><td>Certainty®</td><td>Crossbow® L</td></tr> <tr><td>dicamba</td><td>Landmark II MP</td></tr> <tr><td>diuron</td><td>Landmark II</td></tr> <tr><td>Endurance</td><td>Poast®</td></tr> <tr><td>Escort</td><td>Ronstar 50 WP</td></tr> <tr><td>Escort XP</td><td>simazine</td></tr> <tr><td>Gallery® 75DF</td><td>Surflan AS</td></tr> <tr><td>Garlon 3A</td><td>Surflan WDG</td></tr> <tr><td>Garlon 4</td><td>Transline®</td></tr> <tr><td>Goal 2XL</td><td>Velpar® DF</td></tr> <tr><td>Krovar I DF</td><td>Velpar L</td></tr> <tr><td>Oust</td><td>2,4-D</td></tr> <tr><td>Oust XP</td><td></td></tr> </table> <p>When applied as a tank mixture for bare ground, this product provides control of the emerged annual weeds and control of partial control of emerged perennial weeds, woody brush and trees.</p> <p>For control or partial control of the following perennial weeds, apply 1.5 to 3.0 pints (24.0 to 48.0 fl oz) of this product plus the labeled rate of Oust or Oust XP per acre.</p> <table border="0"> <tr><td>Bahiagrass</td><td>Dock, curly</td><td>Poorjoe</td></tr> <tr><td>Bermudagrass</td><td>Dogfennel</td><td>Quackgrass</td></tr> <tr><td>Broomsedge</td><td>Fescue, tall</td><td>Vaseygrass</td></tr> <tr><td>Dallisgrass</td><td>Johnsongrass</td><td>Vervain, blue</td></tr> </table>	Arsenal	Outrider®	atrazine	pendimethalin	Barricade 65WG	Plateau	Certainty®	Crossbow® L	dicamba	Landmark II MP	diuron	Landmark II	Endurance	Poast®	Escort	Ronstar 50 WP	Escort XP	simazine	Gallery® 75DF	Surflan AS	Garlon 3A	Surflan WDG	Garlon 4	Transline®	Goal 2XL	Velpar® DF	Krovar I DF	Velpar L	Oust	2,4-D	Oust XP		Bahiagrass	Dock, curly	Poorjoe	Bermudagrass	Dogfennel	Quackgrass	Broomsedge	Fescue, tall	Vaseygrass	Dallisgrass	Johnsongrass	Vervain, blue	
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### 13.3 - Injection and Frill (Woody Brush and Trees)

LABELED SITES: Woody brush and Trees in non-crop areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<p>Injection or Frill Applications</p>	<p>Apply this product using suitable equipment which must penetrate into the living tissue. Apply the equivalent of 0.75 mL of this product per each 2 to 3 inches of trunk diameter at breast height (DBH). This is best achieved by applying a 50 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter</p>	<p>Do not use application techniques that allow runoff to occur from frilled or cut areas in species that exude sap freely.</p> <p>In species such as this, make the frill or cuts at an oblique angle to produce a cupping effect and use a 100 percent concentration of this</p>

### 13.3 - Injection and Frill (Woody Brush and Trees)

LABELED SITES: Woody brush and Trees in non-crop areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS										
<i>Injection or Frill Applications cont'd</i>	<p>increases in size, better results are achieved by applying diluted material to a continuous frill or more closely spaced cuttings.</p> <p>For best results, make application during periods of active growth and after full leaf expansion. This product will control many species, some of which are listed below:</p> <table> <tr> <td><u>Control</u></td> <td><u>Partial Control</u></td> </tr> <tr> <td>Oak</td> <td>Black gum</td> </tr> <tr> <td>Poplar</td> <td>Dogwood</td> </tr> <tr> <td>Sweetgum</td> <td>Hickory</td> </tr> <tr> <td>Sycamore</td> <td>Maple, red</td> </tr> </table>	<u>Control</u>	<u>Partial Control</u>	Oak	Black gum	Poplar	Dogwood	Sweetgum	Hickory	Sycamore	Maple, red	product.
<u>Control</u>	<u>Partial Control</u>											
Oak	Black gum											
Poplar	Dogwood											
Sweetgum	Hickory											
Sycamore	Maple, red											

### 13.4 - Hollow Stem Injection

LABELED SITES: Hollow-stem plants growing in any non-crop site specified on this label.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Hand-Held Injection Devices That Deliver Labeled Amounts Of This Product	<p>For control of the following hollow-stem plants, use the application rates below:</p> <p>Japanese Knotweed, <i>Polygonum cuspidatum</i> Inject 3.75 mL per stem of this product between second and third internode.</p> <p>Bohemian Knotweed, <i>Polygonum bohemicum</i> Inject 3.75 mL per stem of this product between the second and third internode.</p> <p>Giant Hogweed, <i>Hercleum mantegazzianum</i> Inject one leaf cane per plant 12 inches above the root crown with 3.75 mL of a 5% v/v solution of this product.</p> <p>Poison Hemlock, <i>Conium maculatum</i> Inject one leaf cane per plant 10 to 12 inches above the root crown with 3.75 mL a 5% v/v solution of this product.</p> <p>Field horsetail, <i>Equisetum arvense</i> Inject one segment above the root crown with 3.75 mL per stem of this product. Use a small syringe that calibrates to this rate.</p> <p>Canada Thistle, <i>Cirsium arvense</i> Cut 8 to 9 of the tallest plants at bud stage in a clump with clippers. Use a cavity needle that is pushed into the stem center and then slowly removed as 3.75 mL per stem of this product is injected into the stem.</p>	<p>The combined total for all treatments must not exceed 5.25 quarts (168 fl oz) of this product per acre.</p> <p>5.25 quarts (168 fl oz) treats approximately 1300 stems per acre.</p>

### 13.5 - Ornamentals, Plant Nurseries and Christmas Trees

LABELED SITES: Plant Nurseries, Christmas Tree farms and other non-food tree production sites

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Post-Directed, Trim-and-Edge	<p>This product may be used as a post-directed spray around established woody ornamental species (including Arborvitae, Azalea, Boxwood, Crabapple, Eucalyptus, Euonymus, Fir, Douglas fir, Jojoba, Hollies, Lilac, Magnolia, Maple, Oak, Poplar, Privet, Pine, Spruce and yew, growing in plant nurseries, on Christmas tree farms, or on other non-food tree production sites), or to trim and edge around trees, buildings, sidewalks, roads, potted plants and other objects in a production setting.</p> <p>Apply at a concentration labeled in the ANNUAL WEEDS, PERENNIAL WEEDS, WOODY BRUSH and TREES sections, appropriate to the species of weed to be controlled.</p> <p>Avoid contact of spray, drift or mist with foliage or green bark of desirable ornamental species. Desirable plants may be protected from the spray solution by using shields or coverings made of cardboard or other impermeable material.</p>	This product is not allowed for use as an over-the-top broadcast spray in ornamentals and Christmas trees.
Site Preparation	This product may be used prior to planting any tree, shrub or vine, including Christmas tree species, in a nursery or production setting.	
Wiper Application	This product may be used through wick or other suitable wiper applicators to control or partially control undesirable vegetation around established trees, shrubs or vines. See the "SELECTIVE EQUIPMENT" section of this label for further information about the proper use of wiper applicators.	

### 13.6 - Parks, Recreational and Residential Areas

LABELED SITES: Around Trees, Fences, Paths, Driveways, Around Buildings, Patios, Sidewalks, Flower Beds, Around Shrubs and other Ornamental Plants

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Trim-and-Edge, Spot Treatment	<p>This product may be used to eliminate unwanted weeds growing in areas listed above.</p> <p>Use suitable hand held equipment for directed spraying according to instructions in Section 6.4 "MIXING FOR HAND-HELD SPRAYERS".</p> <p>If necessary, use cardboard or plastic to shield desirable plants.</p>	<p>Do not allow spray, drift or mist to contact foliage or green bark of desirable ornamental species.</p> <p>Do not use for spot weed control in lawns since desirable lawn grass will also be killed.</p>
Site Preparation, Lawn Renovation	<p>This product may be used prior to planting an area to ornamentals, flowers, turfgrass (sod or seed), lawn renovation or prior to laying asphalt or beginning construction projects.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>Apply using suitable broadcast or directed spray equipment.</p>	

### 13.6 - Parks, Recreational and Residential Areas

LABELED SITES: Around Trees, Fences, Paths, Driveways, Around Buildings, Patios, Sidewalks, Flower Beds, Around Shrubs and other Ornamental Plants

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Site Preparation, Lawn Renovation cont'd</i>	<p>For lawn renovation, thorough coverage is necessary to kill all weeds and old lawn.</p> <p>For best results, apply when daytime temperatures are at least 60° F. Do not mow for 7 days before or after treatment.</p> <p>7 days after application, soil may be tilled, fertilized and seeded.</p>	

### 13.7 - Railroads

LABELED SITES: Railroad Rights-of-Way, Railroad Ballast areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS														
<p>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment</p>	<p>Observe application precautions in the APPLICATION EQUIPMENT and TECHNIQUES section of this label.</p> <p>All of the instructions in the "NONCROP AREAS AND INDUSTRIAL SITES" section apply to railroads. Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>This product may be used to maintain bare ground on railroad ballast and shoulders. Repeat applications of this product may be used, as weeds emerge, to maintain bare ground. This product may be used to control tall-growing weeds to improve line-of-sight at railroad crossings and reduce the need for mowing along rights-of-way. For crossing applications, up to 80 gallons of spray solution per acre may be used.</p> <p>Avoid application to non-target plants due to drift, overspray or runoff.</p> <p>TANK MIXTURES: This product may be tank mixed with the following products (or generic equivalent) for ballast, shoulder, spot, bare ground and crossing treatments provided that the specific product is registered for use on such sites. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <table> <tbody> <tr> <td>ARSENAL®</td> <td>KROVAR® I DF</td> </tr> <tr> <td>Dicamba</td> <td>OUST®</td> </tr> <tr> <td>DIURON</td> <td>SAHARA®</td> </tr> <tr> <td>ESCORT®</td> <td>SPIKE®</td> </tr> <tr> <td>GARLON® 3A</td> <td>TELAR®</td> </tr> <tr> <td>GARLON® 4</td> <td>VELPAR®</td> </tr> <tr> <td>HYVAR® X</td> <td>2,4-D</td> </tr> </tbody> </table>	ARSENAL®	KROVAR® I DF	Dicamba	OUST®	DIURON	SAHARA®	ESCORT®	SPIKE®	GARLON® 3A	TELAR®	GARLON® 4	VELPAR®	HYVAR® X	2,4-D	
ARSENAL®	KROVAR® I DF															
Dicamba	OUST®															
DIURON	SAHARA®															
ESCORT®	SPIKE®															
GARLON® 3A	TELAR®															
GARLON® 4	VELPAR®															
HYVAR® X	2,4-D															

### 13.7 - Railroads

LABELED SITES: Railroad Rights-of-Way, Railroad Ballast areas

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS												
<p><i>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment cont'd</i></p>	<p>Brush control            This product may be used to control woody brush and trees on railroad rights-of-way. Apply 3.0 to 7.5 quarts (96.0 to 240 fl oz) of this product per acre as a broadcast spray, using boom-type or boomless nozzles. Up to 80.0 gallons of spray solution per acre may be used. Apply a ¼ to 2 percent solution of this product when using high-volume spray-to-wet applications. Apply a 5 to 10 percent solution of this product when using low volume directed sprays for spot treatment. This product may be mixed with the following products (or generic equivalent) for enhanced control of woody brush and trees:</p> <table border="0"> <tr> <td>ARSENAL®</td> <td>TELAR DF</td> </tr> <tr> <td>ESCORT®</td> <td>TORDON® K</td> </tr> <tr> <td>KERNITE</td> <td>TORDON 22K</td> </tr> <tr> <td>GARLON 4</td> <td>TRANSLINE</td> </tr> <tr> <td>GARLON® 3A</td> <td>VELPAR</td> </tr> <tr> <td></td> <td>VANQUISH</td> </tr> </table>	ARSENAL®	TELAR DF	ESCORT®	TORDON® K	KERNITE	TORDON 22K	GARLON 4	TRANSLINE	GARLON® 3A	VELPAR		VANQUISH	
ARSENAL®	TELAR DF													
ESCORT®	TORDON® K													
KERNITE	TORDON 22K													
GARLON 4	TRANSLINE													
GARLON® 3A	VELPAR													
	VANQUISH													

### 13.8 - Roadsides

LABELED SITES: Roadside Rights of Way areas (including Shoulders, Guardrails and Signposts)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS																		
<p>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, And Similar Equipment.</p>	<p>Observe application precautions in the APPLICATION EQUIPMENT and TECHNIQUES section of this label.</p> <p>All the instructions in the "NONCROP AREAS AND INDUSTRIAL SITES" section apply to roadsides.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>This product may be used on road shoulders, under guardrails and around signposts and other objects along roadsides that may be obstacles to mowing.</p> <p>Avoid application to non-target plants due to drift, overspray or runoff.</p> <p>TANK MIXTURES: This product may be tank-mixed with the following products (or generic equivalent) for shoulder, guardrail, spot and bare ground treatments:</p> <table border="0"> <tr> <td>BANVEL®</td> <td>PRINCEP® LIQUID</td> </tr> <tr> <td>DIURON</td> <td>RONSTAR® 50 WP</td> </tr> <tr> <td>ENDURANCE®</td> <td>SAHARA®</td> </tr> <tr> <td>ESCORT®</td> <td>SIMAZINE</td> </tr> <tr> <td>KROVAR® I DF</td> <td>SURFLAN®</td> </tr> <tr> <td>OUST®</td> <td>TELAR®</td> </tr> <tr> <td>PENDULUM® WDG</td> <td>VANQUISH®</td> </tr> <tr> <td>PENDULUM® 3.3 EC</td> <td>2,4-D</td> </tr> <tr> <td>PRINCEP® DF</td> <td></td> </tr> </table>	BANVEL®	PRINCEP® LIQUID	DIURON	RONSTAR® 50 WP	ENDURANCE®	SAHARA®	ESCORT®	SIMAZINE	KROVAR® I DF	SURFLAN®	OUST®	TELAR®	PENDULUM® WDG	VANQUISH®	PENDULUM® 3.3 EC	2,4-D	PRINCEP® DF		
BANVEL®	PRINCEP® LIQUID																			
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PRINCEP® DF																				

### 13.8 - Roadsides

LABELED SITES: Roadside Rights of Way areas (including Shoulders, Guardrails and Signposts)

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off- Center Nozzles, Hand-Held Equipment, And Similar Equipment cont'd</i>	<p>It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>See the "NONCROP AREAS AND INDUSTRIAL SITES" section of this label for instructions for tank mixing.</p>	
Spot treatment	This product may be used as a spot treatment to control unwanted vegetation growing along roadsides.	

### 13.9 - Utility Sites

LABELED SITES: Electrical Power, Pipeline And Telephone Rights-Of-Way, And In Other Sites Associated With These Rights-Of-Way, Including Substations, Roadsides, Railroads Or Similar Rights-Of-Way That Run In Conjunction With Utilities.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
Boom Sprayers, Shielded Boom Sprayers, High-Volume Off- Center Nozzles, Hand-Held Equipment, And Similar Equipment.	<p>Observe application precautions in in the APPLICATION EQUIPMENT and TECHNIQUES section of this label.</p> <p>This product may be used in utility sites and substations to control unwanted vegetation and to eliminate unwanted weeds growing in established shrub beds or ornamental plantings. This product may be used prior to planting a utility site to ornamentals, flowers, turfgrass (sod or seed), or beginning construction projects.</p> <p>Make applications according to the rates listed in Annual Weeds, Perennial Weeds, and Woody Brush and Trees rate tables in this label.</p> <p>Avoid application to non-target plants due to drift, overspray or runoff.</p> <p>A follow up application of this product may be used, up to the maximum labeled rate, as weeds emerge, to maintain bare ground.</p> <p>This product can also be used when preparing or establishing wildlife openings within these sites, maintaining access roads and for side trimming along utility rights-of-way.</p> <p>For control of herbaceous weeds, use the lower labeled tank mixture rates. For control of dense stands of tough-to-control woody brush and trees, use the higher labeled rates.</p> <p>TANK MIXTURES: Tank mixtures of this product may be used to increase the spectrum of control for herbaceous weeds, woody brush and trees. This product may be tank mixed with the following products or generic equivalent). Refer to these products' labels for approved non-crop sites and application rates. It is the pesticide user's responsibility to ensure that all products are registered for the intended use.</p>	

### 13.9 - Utility Sites

LABELED SITES: Electrical Power, Pipeline And Telephone Rights-Of-Way, And In Other Sites Associated With These Rights-Of-Way, Including Substations, Roadsides, Railroads Or Similar Rights-Of-Way That Run In Conjunction With Utilities.

TYPES OF APPLICATIONS	USE DIRECTIONS	RESTRICTIONS
<i>Boom Sprayers, Shielded Boom Sprayers, High-Volume Off-Center Nozzles, Hand-Held Equipment, And Similar Equipment.</i>	Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Arsenal                      Krenite                      simazine atrazine                      Krovar 1 DF                      Surflan AS Barricade 65WG                      Oust                      Surflan WDG dicamba                      Oust XP                      Telar DF diuron                      Outrider                      Transline Endurance                      pendimethalin                      2,4-D Escort                      Plateau                      Velpar DF Escort XP                      Princep                      Velpar L Garlon 4                      Ronstar 50WP                      Vanquish Garlon 3A                      Sahara	

### 14.0 ANNUAL WEEDS RATE TABLES (Alphabetical By Species)

Water carrier volumes of 3.0 to 10.0 gallons per acre for ground applications and 3.0 to 5.0 gallons per acre for aerial applications are required.

This product may be used up to 2.25 pints (36.0 fluid ounces) per acre where heavy weed densities exist. For weeds that have been mowed, grazed or cut, allow regrowth to occur prior to treatment.

**RESTRICTIONS:**

Do not tank mix with soil residual herbicides when using these rates unless otherwise specified.

West Region	Alaska, Arizona, California, Colorado, Idaho, Kansas (west of Highway 83), Montana, Nebraska (west of Highway 83), Nevada, New Mexico, North Dakota (west of Highway 83), Oregon, South Dakota (west of Highway 83), Texas, Utah, Washington, Wyoming
North Region	Connecticut, Indiana (north of I-70), Iowa, Kansas (east of Highway 83 and north of I- 35), Maine, Massachusetts, Minnesota, Missouri (north of I-44), Nebraska (east of Highway 83), New Hampshire, New Jersey, New York, North Dakota (east of Highway 83), Ohio, Pennsylvania, Rhode Island, South Dakota (east of Highway 83), Vermont, Wisconsin
South Region	Alabama, Arkansas, Delaware, Florida, Georgia, Hawaii, Illinois(south of I-70), Indiana (south of I-70), Kansas (east of Highway 83 and south of I-35), Kentucky, Louisiana, Maryland, Mississippi, Missouri (south of I-44), North Carolina, Oklahoma (east of I-35), South Carolina, Tennessee, Texas (east of I-35), Virginia, Washington DC, West Virginia

**ANNUAL WEEDS RATE TABLE, NORTH AND SOUTH REGIONS**

WEED SPECIES	REGION	RATE (FLUID OUNCES PER ACRE)					
		9.0	12.0	18.0	24.0	30.0	36.0
		MAXIMUM HEIGHT/LENGTH					
Annoda, spurred		-	1"	2"	3"	5"	8"
Barley		-	18"	18"+	-	-	-
Barnyardgrass	South	-	3"	5"	7"	9"	12"
	North	-	-	6"	12"	-	-
Bassia, fivehook		-	-	-	6"	-	-
Bittercress		-	12"	20"	-	-	-
Bluegrass, annual		-	10"	-	-	-	-
Brome, downy		6"	-	-	-	-	-
Brome, Japanese		-	6"	-	24"	-	-
Browntop panicum		-	6"	8"	12"	-	24"
Burcucumber		-	-	6"	12"	-	-
Buttercup		-	12"	20"	-	-	-
Carolina foxtail		-	20"	-	-	-	-
Carolina geranium		-	-	-	4"	-	9"
Carpetweed		-	-	6"	12"	-	-
Cheat		-	6"	20"	-	-	-
Chervil		-	20"	-	-	-	-
Chickweed		-	12"	18"	-	-	-
Cocklebur		-	12"	18"	24"	-	-
Copperleaf, hophornbeam		-	1"	2"	3"	4"	6"
Copperleaf, Virginia		-	1"	2"	3"	4"	6"
Corn		-	12"	20"	-	-	-
Corn speedwell		-	12"	-	-	-	-
Crabgrass		-	12"	18"	-	-	-
Cutleaf evening primrose		-	-	-	3"	3"	6"
Dwarf dandelion		-	20"	-	-	-	-
Eastern mannagrass		-	8"	12"	-	-	-
Eclipta		-	4"	8"	12"	-	-
Fall panicum	South	-	4"	6"	8"	12"	24"
	North	-	6"	12"	18"	-	-
Falsedandelion		-	20"	-	-	-	-
Falseflax, smallseed		-	12"	-	-	-	-
Fiddleneck		-	-	-	6"	6"	12"
Field pennycress		-	6"	12"	-	-	-
Filaree		-	-	-	-	-	12"
Fleabane, annual		-	6"	20"	-	-	-
Fleabane, hairy ( <i>Conyza bonariensis</i> )		-	6"	-	-	-	-
Fleabane, rough		-	3"	6"	12"	-	-
Florida pusley		-	-	-	4"	4"	6"
Foxtail	South	-	8"	12"	20"	-	-
	North	18"	18"+	-	-	-	-
Goatgrass, jointed		-	6"	-	-	-	-
Goosegrass		-	3"	5"	8"	-	18"
Grain sorghum (milo)		-	6"	12"	20"	-	-

WEED SPECIES	REGION	RATE (FLUID OUNCES PER ACRE)					
		9.0	12.0	18.0	24.0	30.0	36.0
		MAXIMUM HEIGHT/LENGTH					
Groundsel, common		-	6"	-	-	-	-
Hemp sesbania		-	-	2"	4"	6"	8"
Henbit		-	-	-	6"	-	20"
Horseweed/Marestail ( <i>Conyza canadensis</i> )	South	-	-	12"	30"	-	-
Itchgrass		-	6"	12"	18"	-	-
Johnsongrass, seedling	South	-	-	18"	-	-	-
	North	-	12"	18"	-	-	-
Junglerice		-	3"	5"	7"	9"	12"
Knotweed		-	3"	8"	12"	-	20"
Kochia <sup>1</sup>		-	3 to 6"	12"	-	-	-
Lambsquarters		-	6"	8"	12"	-	20"
Little barley		-	20"	-	-	-	-
London rocket		-	6"	-	-	-	-
Mayweed		-	-	2"	6"	12"	18"
Morningglory ( <i>Ipomoea spp.</i> )		-	-	2"	4"	-	6"
Mustard, blue		6"	-	-	-	-	-
Mustard, tansy		6"	12"	20"	-	-	-
Mustard, tumble		6"	-	-	-	-	-
Mustard, wild		6"	12"	18"	-	-	-
Nightshade, black		-	6"	12"	-	-	-
Nightshade, hairy		-	6"	12"	-	-	-
Oats		-	-	6"	20"	-	-
Pigweed		-	12"	18"	24"	-	-
Prickly lettuce		-	6"	12"	20"	-	-
Purslane		-	-	-	6"	6"	12"
Ragweed, common	South	-	4"	6"	8"	-	11"
	North	-	6"	12"	18"	-	-
Ragweed, giant		-	-	4"	6"	-	11"
Red rice		-	-	-	4"	-	-
Russian thistle		-	-	-	6"	-	-
Rye	South	-	6"	20"	60"	-	-
	North	-	18"	18"+	-	-	-
Ryegrass		-	-	-	6"	-	7"+
Sandbur, field		12"	-	-	-	-	-
Shattercane		-	12"	18"	-	-	-
Sheperd's purse		-	6"	12"	-	-	-
Sicklepod		-	-	2"	4"	-	8"
Signalgrass, broadleaf		-	3"	5"	7"	9"	12"
Smartweed, ladythumb		-	4"	6"	8"	-	12"
Smartweed, Pennsylvania		-	4"	6"	8"	-	12"
Sowthistle, annual		-	-	-	6"	-	12"
Spanishneedles		-	-	-	8"	-	18"
Speedwell, purslane		-	12"	-	-	-	-
Sprangletop		-	6"	12"	20"	-	-

WEED SPECIES	REGION	RATE					
		(FLUID OUNCES PER ACRE)					
		9.0	12.0	18.0	24.0	30.0	36.0
		MAXIMUM HEIGHT/LENGTH					
Spurge, prostrate		-	6"	12"	20"	-	-
Spurge, spotted		-	6"	12"	20"	-	-
Spurry, umbrella		6"	-	-	-	-	-
Stinkgrass		12"	-	-	-	-	-
Sunflower		-	12"	18"	-	-	-
Teaweed/Prickly sida		-	1"	2"	3"	4"	6"
Texas panicum		-	6"	8"	12"	-	24"
Velvetleaf	South	-	2"	3"	4"	5"	8"
	North	-	3"	6"	12"	-	-
Virginia pepperweed		-	18"	-	-	-	-
Waterhemp		-	-	6"	12"	-	-
Spurge, spotted		-	6"	12"	20"	-	-
Wheat	South	-	6"	30"	-	-	-
	North	-	18"	18 <sup>+</sup>	-	-	-
Wheat (overwintered)		-	6"	18"	-	-	-
Wild oats		-	12"	-	-	-	-
Wild Proso Millet		-	-	6"	12"	12"	18"
Witchgrass		-	12"	-	-	-	-
Woolly cupgrass		-	6"	12"	-	-	-
Yellow rocket		-	-	12"	20"	-	-

<sup>1</sup>Do not treat kochia in the button stage.

#### ANNUAL WEEDS RATE TABLE, WEST REGION

WEED SPECIES	RATE						
	(FLUID OUNCES PER ACRE)						
	9.0	12.0	18.0	24.0	36.0		
		MAXIMUM HEIGHT/LENGTH					
Barley		12"	-	-	-	-	
Barnyardgrass		6"	-	-	-	-	
Bluegrass, annual		6"	-	-	-	-	
Bluegrass, bulbous		-	6"	-	-	-	
Brome, downy <sup>1</sup>		6"	-	-	-	-	
Buttercup		-	12"	-	-	-	
Cheat		-	6"	-	-	-	
Chickweed		-	6"	-	-	-	
Cocklebur		-	12"	-	-	-	
Corn		-	6"	-	-	-	
Crabgrass		-	12"	-	-	-	
Dwarf dandelion		-	12"	-	-	-	
Fall panicum		-	12"	-	-	-	
Falseflax, smallseed		-	12"	-	-	-	
Field pennycress		-	6"	-	-	-	
Filaree		-	-	-	-	12"	
Fleabane, hairy ( <i>Conyza bonariensis</i> )		-	6"	-	-	-	

WEED SPECIES	RATE				
	(FLUID OUNCES PER ACRE)				
	9.0	12.0	18.0	24.0	36.0
Florida pusley	-	-	-	12"	-
Foxtail	6 fl. oz. for up to 12"				
Goatgrass, jointed	-	6"	-	-	-
Groundsel, common	-	6"	-	-	-
Henbit	-	6"	-	-	-
Horseweed/Marestail ( <i>Conyza canadensis</i> )	-	6"	-	-	-
Johnsongrass, seedling	-	12"	-	-	-
Lambsquarters	-	6"	-	-	-
London rocket	-	6"	-	-	-
Morningglory ( <i>Ipomoea spp.</i> )	-	2"	-	-	-
Mustard, blue	6"	-	-	-	-
Mustard, tansy	6"	-	-	-	-
Mustard, tumble	6"	-	-	-	-
Mustard, wild	6"	-	-	-	-
Pigweed	-	12"	-	-	-
Rye	12"	-	-	-	-
Ryegrass, Italian	-	6"	-	-	-
Sandbur, field	12"	-	-	-	-
Shattercane	12"	-	-	-	-
Sheperd's purse	-	6"	-	-	-
Sowthistle, annual	-	6"	-	-	-
Spurge, annual	-	6"	-	-	-
Stinkgrass	12"	-	-	-	-
Texas panicum	-	12"	-	-	-
Wheat	18"	-	-	-	-
Wild oats	-	12"	-	-	-
Witchgrass	-	12"	-	-	-

<sup>1</sup>For control of Downy brome in no-till systems, use 12.0 fluid ounces per acre.

#### 14.1 Annual Weeds – 10.0 to 40.0 Gallons Per Acre in Water

Apply 1.5 pints to 2.25 pints of this product per acre. Use 1.5 pints per acre if weeds are less than 6 inches tall and 2.25 pints per acre if weeds are over 6 inches tall.

These rates will provide control of weeds listed in the annual weed control tables when water carrier volumes are 10.0 to 40.0 gallons per acre for ground applications.

#### 14.2 Annual Weeds - Tank Mixtures with 2,4-D or Banvel®

9.0 to 12.0 fluid ounces of this product plus the labeled rate of of Banvel® or the labeled rate of 2,4-D per acre will control the following weeds with the maximum height or length indicated: Prickly lettuce, Marestail/horseweed (*Conyza canadensis*), Morningglory (*Ipomoea spp.*), Kochia (Banvel® only); Cocklebur, Lambsquarters, Pigweed, Russian thistle.

12.0 fluid ounces of this product plus the labeled rate of 2,4-D per acre will control the following weeds when they are a maximum height or length of 6 inches: Common ragweed, Giant ragweed, Pennsylvania smartweed, and Velvetleaf.

9.0 fluid ounces of the product plus the labeled rate of Banvel® or the labeled rate of 2,4-D per acre will control Foxtail.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**RESTRICTION:**

DO NOT APPLY BANVEL® TANK MIXTURES BY AIR IN CALIFORNIA

**15.0 PERENNIAL WEEDS RATE TABLE (Alphabetical By Species)**

Apply to actively growing perennial weeds.

A second treatment may be necessary to control weeds regenerating from underground parts or seed. The second treatment must be made prior to crop emergence.

Unless otherwise stated, allow 7 or more days after application before tillage.

**RESTRICTION:**

If weeds have been mowed or tilled, do not treat until plants have resumed active growth and have reached the labeled stages.

Best results are obtained when soil moisture is adequate for active weed growth.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Alfalfa	1.5 to 3.0	3.0 to 10.0	1.5%	Make applications after the last hay cutting in the fall.  Allow alfalfa to regrow to a height of 6 to 8 inches or more prior to treatment.  Follow applications with deep tillage at least 7 days after treatment, but before soil freeze-up.
Alligatorweed	6.0	3.0 to 20.0	1.25%	Partial control. Apply when most of the plants are in bloom.  Repeat applications will be required to maintain control.
Anise (fennel)	-	-	0.75 to 1.5%	Apply as a spray-to-wet treatment.  Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Bahiagrass	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants have reached the early head stage.
Bentgrass	2.25	10.0 to 20.0	1.5%	For suppression in grass seed production areas. For ground applications only.  Ensure entire crown area has resumed growth prior to a fall application.  Bentgrass should have at least 3 inches of growth. Do not till prior to treatment.  Till 7 to 10 days after application for best results.
Bermudagrass	4.5 to 7.5	3.0 to 20.0	1.5%	For control, apply 7.5 pints of this product per acre. For partial control, apply 4.5 pints per acre.  Treat when bermudagrass is actively growing and seedheads are present.  A second treatment may be necessary to maintain control.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Bermudagrass, water (knotgrass)	1.5 to 2.25	5.0 to 10.0	1.5%	<p>Apply 2.25 pints of this product in 5.0 to 10.0 gallons of water per acre. Apply when water bermudagrass is 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.</p> <p>Fall applications only: Apply 1.5 pints of this product in 5.0 to 10.0 gallons of water per acre.</p> <p>Till fallow fields prior to application.</p> <p>Apply prior to frost on water bermudagrass that is 12 to 18 inches in length.</p> <p>RESTRICTION: This product is not registered in California for use on water bermudagrass</p>
Bindweed, field	0.75 to 7.5	3.0 to 20.0	1.5%	<p>Do not treat when weeds are under drought stress as good soil moisture is necessary for active growth.</p> <p>For control, apply 6.0 to 7.5 pints of this product per acre west of the Mississippi River and 4.5 to 6.0 pints east of the Mississippi River.</p> <p>Apply when the weeds are at or beyond full bloom. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost.</p> <p>Also for control, apply 3.0 pints of this product plus the labeled rate of Banvel® in 10.0 to 20.0 gallons of water per acre. Do not apply by air.</p> <p>For suppression on irrigated agricultural land, apply 1.5 to 3.0 pints of this product plus the specified label rate of a 2,4-D product in 10.0 to 20.0 gallons of water per acre with ground equipment only.</p> <p>It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>Make applications following harvest or in fall fallow ground when the bindweed is actively growing and the majority of runners are 12 inches or more in length. The use of at least one irrigation will promote active bindweed growth.</p> <p>For suppression, apply 12.0 fluid ounces of this product plus the specified label rate of a 2,4-D product in 3.0 to 10.0 gallons of water per acre for ground applications and 3.0 to 5.0 gallons of water per acre for aerial applications.</p> <p>Apply by air in fallow and reduced tillage systems only. Delay applications until maximum emergence has occurred and when vines are between 6 to 18 inches in length.</p> <p>In California only, apply 1.5 to 7.5 pints of this product per acre.</p> <p>Actual rate needed for suppression or control will vary within this range depending on local conditions. For suppression on irrigated</p>

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
<i>Bindweed, field cont'd</i>	0.75 to 7.5	3.0 to 20.0	1.5%	land where annual tillage is performed, apply 1.5 pints of this product in 3.0 to 10.0 gallons of water per acre.  Apply to bindweed that has reached a length of 12 inches or greater.  Allow maximum weed emergence and runner growth. Allow 3 or more days after application before tillage.
Bluegrass, Kentucky	1.5 to 3.0	3.0 to 40.0	1.5%	Apply 3.0 pints of this product in 10.0 to 40.0 gallons of water per acre when most plants have reached boot- to-early seedhead stage of development.  For partial control in pasture or hay crop renovation, apply 1.5 to 2.25 pints of this product in 3.0 to 10.0 gallons of water per acre.  Apply to actively growing plants when most have reached 4 to 12 inches in height.
Bluweed, Texas	4.5 to 7.5	3.0 to 40.0	1.5%	Apply 6.0 to 7.5 pints of this product per acre west of the Mississippi River and 4.5 to 6.0 pints per acre east of the Mississippi River.  Apply when plants are at or beyond full bloom. New leaf development indicates active growth. For best results, apply in late summer or fall.  Fall treatments must be applied before a killing frost.
Brackenfern	4.5 to 6.0	3.0 to 40.0	0.75 to 1.5%	Apply to fully expanded fronds which are at least 18 inches long.
Bromegrass, smooth	1.5 to 3.0	3.0 to 40.0	1.5%	Apply 3.0 pints of this product in 10.0 to 40.0 gallons of water per acre when most plants have reached boot- to-early seedhead stage of development.  For partial control in pasture or hay crop renovation, apply 1.5 to 2.25 pints of this product in 3.0 to 10.0 gallons of water per acre.  Apply to actively growing plants when most have reached 4 to 12 inches in height.
Bursage, woolly- leaf	-	3.0 to 20.0	1.5%	For control, apply 3.0 pints of this product plus the labeled rate of Banvel <sup>®</sup> per acre. For partial control, apply 1.5 pints of this product plus the labeled rate of Banvel <sup>®</sup> per acre.  Apply when plants are producing new active growth which has been initiated by moisture for at least 2 weeks and when plants are at or beyond flowering.
Canarygrass, reed	3.0 to 4.5	3.0 to 40.0	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Cattail	4.5 to 7.5	3.0 to 40.0	1.5%	Apply when most plants have reached the early head stage.
Clover; red, white	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants have reached the early bud stage.
Cogongrass	4.5 to 7.5	10.0 to 40.0	1.5%	Apply when cogongrass is at least 18 inches tall in late summer or fall.  Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Dallisgrass	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants have reached the early head stage.
Dandelion	4.5 to 7.5	3.0 to 40.0	1.5%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 12.0 fluid ounces of this product plus the specified label rate of a 2,4-D product in 3.0 to 10.0 gallons of water per acre.  It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
Dock, curly	4.5 to 7.5	3.0 to 40.0	1.5%	Apply when most plants have reached the early bud stage of growth.  Also for control, apply 12.0 fluid ounces of this product plus the specified label rate of a 2,4-D product in 3.0 to 10.0 gallons of water per acre.
Dogbane, hemp	6.0	3.0 to 40.0	1.5%	Apply when most plants have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall.  For suppression, apply 12.0 fluid ounces of this product plus the labeled rate of 2,4-D in 3.0 to 10.0 gallons of water per acre for ground applications and 3.0 to 5.0 gallons of water per acre for aerial applications.  Delay applications until maximum emergence of dogbane has occurred.
Fescue (except tall)	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants have reached the early head stage.
Fescue, tall	1.5 to 4.5	3.0 to 40.0	1.5%	Apply 4.5 pints of this product per acre when most plants have reached boot-to-early seedhead stage of development.  Fall applications only: Apply 1.5 pints of this product in 3.0 to 10.0 gallons of water per acre.  Apply to fescue in the fall when plants have 6 to 12 inches of new growth.  A sequential application of 12.0 fluid ounces per acre of this product will improve long-term control and control seedlings germinating after fall treatments or the following spring.
Guineagrass	4.5	3.0 to 40.0	0.75%	Apply when most plants have reached at least the 7- leaf stage of growth.  Ensure thorough coverage when using hand-held equipment.
Horsenettle	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants have reached the early bud stage.
Horseradish	6.0	3.0 to 40.0	1.5%	Apply when most plants have reached the late bud to flower stage of growth.  For best results, apply in late summer or fall.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Iceplant	-	-	1.5%	Iceplant should be at or beyond the early bud stage of growth. Thorough coverage is necessary for best control.
Jerusalem artichoke	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants are in the early bud stage.
Johnsongrass	0.75 to 4.5	3.0 to 40.0	0.75%	In annual cropping systems apply 1.5 to 3.0 pints of this product per acre.  Apply 1.5 pints of this product in 3.0 to 10.0 gallons of water per acre. Use 3.0 pints of this product when applying 10.0 to 40.0 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 3.0 to 4.5 pints of this product in 10.0 to 40.0 gallons of water per acre.  For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost.  Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using the 1-quart per acre rate.  For burndown of Johnsongrass, apply 12.0 fluid ounces of this product in 3.0 to 10.0 gallons of water per acre before the plants reach a height of 12 inches.  For this use, allow at least 3 days after treatment before tillage.  Spot treatment (partial control or suppression) - Apply a 3/4 percent solution of this product when Johnsongrass is 12 to 18 inches in height.  Coverage must be uniform and complete.
Kikuyugrass	3.0 to 4.5	3.0 to 40.0	1.5%	Spray when most kikuyugrass is at least 8 inches in height (3 or 4-leaf stage of growth). Allow 3 or more days after application before tillage.
Knapweed	6.0	3.0 to 40.0	1.5%	Apply when most plants have reached the late bud to flower stage of growth.  For best results, apply in late summer or fall.
Lantana	-	-	0.75 to 1.0%	Apply at or beyond the bloom stage of growth.  Use the higher application rate for plants that have reached the woody stage of growth.
Lespedeza	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants have reached the early bud stage.
Milkweed, common	4.5	3.0 to 40.0	1.5%	Apply when most plants have reached the late bud to flower stage of growth.
Muhly, wirestem	1.5 to 3.0	3.0 to 40.0	1.5%	Use 1.5 pints of this product in 3.0 to 10.0 gallons of water per acre. Use 3.0 pints of this product when applying 10.0 to 40.0 gallons of water per acre or in pasture, sod, or noncrop areas.  Spray when the Wirestem muhly is 8 inches or more in height.  Do not till between harvest and fall applications or in the fall or spring prior to spring applications.  Allow 3 or more days after application before tillage.
Mullein, common	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants are in the early bud stage.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Napiergrass	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants are in the early head stage.
Nightshade, silverleaf	3.0	3.0 to 10.0	1.5%	Make applications when at least 60 percent of the plants have berries.  Fall treatments must be applied before a killing frost.
Nutsedge; purple, yellow	0.75 to 4.5	3.0 to 40.0	0.75 to 1.5%	Apply 4.5 pints of this product per acre or apply a ¾ to 1 ½ percent solution for control of nutsedge plants and immature nutlets attached to treated plants.  Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control of ungerminated tubers.  Sequential applications: 1.5 to 3.0 pints of this product in 3.0 to 10.0 gallons of water per acre will also provide control. Make applications when a majority of the plants are in the 3 to 5-leaf stage (less than 6 inches tall). Repeat this application, as necessary, when newly emerging plants reach the 3 to 5-leaf stage. Subsequent applications will be necessary for long-term control.  For partial control of existing plants, apply 12.0 fluid ounces to 3.0 pints of this product in 3.0 to 40.0 gallons of water per acre.  Treat when plants have 3 to 5 leaves and most are less than 6 inches tall.  Repeat treatments will be required to control subsequent emerging plants or regrowth of existing plants.
Orchardgrass	1.5 to 3.0	3.0 to 40.0	1.5%	Apply 3.0 pints of this product in 10.0 to 40.0 gallons of water per acre when most plants have reached boot- to-early seedhead stage of development.  For partial control in pasture or hay crop renovation, apply 1.5 to 2.25 pints of this product in 3.0 to 10.0 gallons of water per acre. Apply to actively growing plants when most have reached 4 to 12 inches in height.  Orchardgrass sods going to no-till corn: Apply 1.5 to 2.25 pints of this product in 3.0 to 10.0 gallons of water per acre.  Apply to orchardgrass that is a minimum of 12 inches tall for spring applications and 6 inches tall for fall applications.  Allow at least 3 days following application before planting. A sequential application of atrazine will be necessary for optimum results.
Pampasgrass	-	-	1.5%	Pampasgrass should be at or beyond the boot stage of growth. Thorough coverage is necessary for best control.
Paragrass	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants are in the early head stage.
Phragmites	4.5 to 7.5	10.0 to 40.0	0.75 to 1.5%	For partial control. For best results, treat during late summer or fall months or when plants are actively growing and in full bloom.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
<i>Phragmites cont'd</i>	4.5 to 7.5	10.0 to 40.0	0.75 to 1.5%	Treatment before or after this stage may lead to reduced control.  Due to the dense nature of the vegetation, which may prevent good spray coverage or uneven stages of growth, repeat treatments may be necessary to maintain control.  Visual control symptoms will be slow to develop.
Poison hemlock	-	-	0.75 to 1.5%	Apply as a spray-to-wet treatment.  Optimum results are obtained when plants are treated at the bud to full-bloom stage of growth.
Pokeweed, common	1.5	3.0 to 40.0	1.5%	Apply to actively growing plants up to 24 inches tall.
Quackgrass	1.5 to 4.5	3.0 to 40.0	1.5%	In annual cropping systems, or in pastures and sods followed by deep tillage:  Apply 1.5 pints of this product in 3.0 to 10.0 gallons of water per acre. For 10.0 to 40.0 gallons of water per acre, apply 3.0 pints of this product. Do not tank mix with residual herbicides when using the 1.5 pint rate.  Spray when Quackgrass is 6 to 8 inches in height. Do not till between harvest and fall applications or in fall or spring prior to spring application.  Allow 3 or more days after application before tillage.  In pastures or sods, use a moldboard plow for best results.  In pastures, sods or noncrop areas where deep tillage does not follow application: Apply 3.0 to 4.5 pints of this product in 10.0 to 40.0 gallons of water per acre when the Quackgrass is greater than 8 inches tall.
Redvine	1.25 to 3.0	5.0 to 10.0	1.5%	For suppression, apply 18.0 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 3.0 pints per acre.  Apply labeled rates in 5.0 to 10.0 gallons of water per acre.  Apply in late September or early October to plants which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Reed, giant	-	-	1.5%	Best results are obtained when applications are made in late summer to fall.
Ryegrass, perennial	1.5 to 4.5	3.0 to 40.0	0.75%	In annual cropping systems apply 1.5 to 3.0 pints of this product per acre. Apply 1.5 pints of this product in 3.0 to 10.0 gallons of water per acre. Use 3.0 pints of this product when applying 10.0 to 40.0 gallons of water per acre. In noncrop, or areas where annual tillage (no-till) is not practiced, apply 3.0 to 4.5 pints of this product in 10.0 to 40.0 gallons water per acre.  For best results, apply when most plants have reached the boot-to-head stage of growth or in the fall prior to frost. Do not tank-mix with residual herbicides when using the 1.5 pint per acre rate.

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Smartweed, swamp	4.5 to 7.5	3.0 to 40.0	1.5%	<p>Apply when most plants have reached the early bud stage of growth.</p> <p>Also for control, apply 12.0 fluid ounces of this product plus the specified label rate of a 2,4-D product in 3.0 to 10.0 gallons of water per acre in the late summer or fall.</p> <p>It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture</p>
Sowthistle, perennial	3.0 to 4.5	3.0 to 40.0	1.5%	<p>Apply when most plants are at or beyond the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product.</p> <p>Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.</p>
Spurge, leafy	-	3.0 to 10.0	1.5%	<p>For suppression, apply 12.0 fluid ounces of this product plus the specified label rate of a 2,4-D product in 3.0 to 10.0 gallons of water per acre in the late summer or fall.</p> <p>If mowing has occurred prior to treatment, apply when most of the plants are 12 inches tall.</p>
Starthistle, yellow	3.0	10.0 to 40.0	1.5%	<p>Best results are obtained when applications are made during the rosette, bolting and early flower stages.</p>
Sweet potato, wild	-	-	1.5%	<p>Partial control. Apply to plants that are at or beyond the bloom stage of growth.</p> <p>Repeat applications may be required.</p>
Thistle, artichoke	-	-	1.5%	<p>Partial control. Apply to plants that are at or beyond the bloom stage of growth.</p> <p>Repeat applications may be required.</p>
Thistle, Canada	3.0 to 4.5	3.0 to 40.0	1.5%	<p>Apply when most plants are at or beyond the bud stage of growth.</p> <p>After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product.</p> <p>Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.</p> <p>For suppression, apply 1.5 pints of this product, or 12.0 fluid ounces of this product plus the specified label rate of a 2,4-D product in 3.0 to 10.0 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.</p> <p>Allow rosette regrowth to a minimum of 6 inches in diameter before treating.</p>

<b>Perennial Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
<i>Thistle, Canada cont'd</i>	3.0 to 4.5	3.0 to 40.0	1.5%	Applications can be made as long as leaves are still green and plants are actively growing at the time of application.  Allow 3 or more days after application before tillage. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
Timothy	3.0 to 4.5	3.0 to 40.0	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.
Torpedograss	6.0 to 7.5	3.0 to 40.0	1.5%	For partial control. Apply when most plants are at or beyond the seedhead stage of growth.  Repeat applications will be required to maintain control. Fall treatments must be applied before frost.
Trumpetcreeper	3.0	5.0 to 10.0	1.5%	Partial control. Apply in late September or October, to plants which are at least 18 inches tall and have been growing 45-60 days since the last tillage operation. Make applications at least 1 week before a killing frost.
Vaseygrass	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants are in the early head stage.
Velvetgrass	4.5 to 7.5	3.0 to 20.0	1.5%	Apply when most plants are in the early head stage.
Wheatgrass, western	3.0 to 4.5	3.0 to 40.0	1.5%	For best results, apply when most plants have reached the boot-to-head stage of growth.

## 16.0 WOODY BRUSH and TREES RATE TABLE (Alphabetical By Species)

Apply this product after full leaf expansion, unless otherwise directed. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when applications are made in the spring to early summer when brush species are at high moisture content and are flowering.

Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. A second treatment may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

<b>Woody Brush and Trees Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Alder	4.5 to 6.0	3.0 to 40.0	0.75 to 1.5%	For control
Ash	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Aspen, quaking	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Bearmat (Bearclover)	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Beech	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Birch	3.0	3.0 to 40.0	0.75%	For control

<b>Woody Brush and Trees Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Blackberry	4.5 to 6.0	10.0 to 40.0	0.75 to 1.5%	For control. Make applications after plants have reached full leaf maturity. Best results are obtained when applications are made in late summer or fall. Applications may also be made after leaf drop and until a killing frost or as long as stems are green. After berries have set or dropped in late fall, blackberry can be controlled by applying a ¾ percent solution of this product. For control of blackberries after leaf drop and until a killing frost or as long as stems are green, apply 4.5 to 6.0 pints of this product in 10.0 to 40.0 gallons of water per acre.
Blackgum	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Bracken	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Broom; French, Scotch	-	-	1.5%	For control
Buckwheat, California	-	-	0.75 to 1.5%	For partial control. Thorough coverage of foliage is necessary for best results.
Cascara	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Catsclaw	-	-	0.75 to 1.5%	Partial control
Ceanothus	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Chamise	-	-	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Cherry; bitter, black, pin	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Coyote brush	-	-	1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Dogwood	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Elderberry	3.0	3.0 to 40.0	0.75%	For control
Elm	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Eucalyptus	-	-	1.5%	For control of eucalyptus resprouts, apply when resprouts are 6 to 12 feet tall. Ensure complete coverage. Avoid application to drought-stressed plants.
Florida holly (Brazilian Peppertree)	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Gorse	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Hasardia	-	-	0.75 to 1.5%	Partial control. Thorough coverage of foliage is necessary for best results.
Hawthorn	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Hazel	3.0	3.0 to 40.0	0.75%	For control
Hickory	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Honeysuckle	3.0 to 6.0	3.0 to 40.0	0.75 to 1.5%	For control
Hornbeam, American	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Kudzu	6.0	3.0 to 40.0	1.5%	For control. Repeat applications may be required to maintain control.
Locust, black	3.0 to 6.0	3.0 to 40.0	0.75 to 1.5%	Partial control
Madrone resprouts	-	-	1.5%	Partial control. Apply to resprouts that are 3 to 6 feet tall. Best results are obtained with spring/early summer treatments.
Manzanita	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Maple, red	3.0 to 6.0	3.0 to 40.0	0.75 to 1.5%	For control, apply a 0.75 to 1.5 percent solution when at least 50 percent of the new leaves are fully developed. For partial control, apply 3.0 to 6.0 pints of this product per acre.
Maple, sugar	-	-	0.75 to 1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Monkey flower	-	-	0.75 to 1.5%	Partial control. Thorough coverage of foliage is necessary for best results.

<b>Woody Brush and Trees Weed Species</b>	<b>Rate (PT/A)</b>	<b>Water Volume</b>	<b>Hand-Held % Solution</b>	<b>Directions</b>
Oak; black, white	3.0 to 6.0	3.0 to 40.0	0.75 to 1.5%	Partial control
Oak, post	4.5 to 6.0	3.0 to 40.0	0.75 to 1.5%	For control
Oak; northern, pin	-	-	0.75 to 1.5%	For control. Apply when at least 50 percent of the new leaves are fully developed.
Oak, southern, red	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Persimmon	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Pine	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Poison ivy/Poison oak	6.0 to 7.5	3.0 to 40.0	1.5%	For control. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.
Poplar, yellow	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Redbud, eastern	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Rose, multiflora	3.0	3.0 to 40.0	0.75%	For control. Make treatments prior to leaf deterioration by leaf-eating insects.
Russian olive	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Sage, black	-	-	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Sage, white	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Sage brush, California	-	-	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Salmonberry	3.0	3.0 to 40.0	0.75%	For control
Salt-cedar	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Sassafras	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Sourwood	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Sumac; poison, smooth, winged	3.0 to 6.0	3.0 to 40.0	0.75 to 1.5%	Partial control
Sweetgum	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Swordfern	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Tallowtree, Chinese	-	-	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak resprouts	-	-	1.5%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.
Thimbleberry	3.0	3.0 to 40.0	0.75%	For control
Tobacco, tree	-	-	0.75 to 1.5%	Partial control
Salt-cedar	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Sassafras	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Sourwood	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Sumac; poison, smooth, winged	3.0 to 6.0	3.0 to 40.0	0.75 to 1.5%	Partial control
Sweetgum	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Swordfern	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Tallowtree, Chinese	-	-	0.75%	For control. Thorough coverage of foliage is necessary for best results.
Tan oak resprouts	-	-	1.5%	For partial control. Apply to resprouts that are less than 3 to 6 feet tall. Best results are obtained with fall applications.
Thimbleberry	3.0	3.0 to 40.0	0.75%	For control
Tobacco, tree	-	-	0.75 to 1.5%	Partial control
Trumpet creeper	3.0 to 4.5	3.0 to 40.0	0.75 to 1.5%	For control
Vine maple	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Virginia creeper	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	For control
Waxmyrtle, southern	3.0 to 7.5	3.0 to 40.0	0.75 to 1.5%	Partial control
Willow	4.5	3.0 to 40.0	0.75%	For control

## 17.0 STORAGE AND DISPOSAL

Do not contaminate water, food, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** Store above 10 °F (-12 °C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68 °F (20 °C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed must be disposed of in a landfill approved for pesticide disposal or in accordance with applicable federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleansed, reconditioned, or destroyed.

**CONTAINER HANDLING: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to and equal to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI Storage and Disposal cont'd: for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.**

## 18.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE. IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

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**FORMULATED FOR  
LOVELAND PRODUCTS, INC.  
P.O. BOX 1286, GREELEY, COLORADO 80632-128**

SUB-LABEL B - For aquatic uses only

GROUP	9	HERBICIDE
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# Glypho 648

Avoid contact of herbicide with foliage, green stems, exposed non-woody roots or fruit of crops, desirable plants and trees, because severe injury or destruction may result.

**ACTIVE INGREDIENT:**

Glyphosate*, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt.....	53.80%
OTHER INGREDIENTS:.....	46.20%
<b>TOTAL</b>	<b>100.00%</b>

\*Contains 648 grams per liter or 5.4 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 480 grams per liter or 4 pounds per U.S. gallon of the acid, glyphosate.

## KEEP OUT OF REACH OF CHILDREN CAUTION

For Additional Precautionary Statements, Complete First Aid, Directions for Use, Storage and Disposal and Other Use Information, See Inside This Label Booklet

### FIRST AID

<b>If Inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If Swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have a person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in Eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. <b>FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.</b>	

EPA REG. NO. 34704-929  
EPA EST. NO. 34704-XX-XXX  
NET CONTENTS 2.5 GAL (9.46 L)

C2516

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## 1.0 INGREDIENTS

**ACTIVE INGREDIENT:**

Glyphosate\*, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt..... 53.80%

**OTHER INGREDIENTS:** ..... 46.20%

**TOTAL** 100.00%

## 2.0 EMERGENCY PHONE NUMBERS

**24-Hour Emergency Phone:** 1-800-424-9300

**Medical Emergencies:** 1-866-944-8565

**U.S. Coast Guard National Response Center:** 1-800-424-8802

## 3.0 PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Domestic Animals: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.).

If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

### 3.1 Physical or Chemical Hazards

Spray solutions of this product must be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

### 3.2 Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- long-sleeved shirt and long pants,
- shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### 3.3 User Safety Recommendations

Users should:

- Wash hands thoroughly after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing or PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing

### 3.4 Environmental Hazards

FOR AQUATIC USES ONLY: Do not contaminate water when disposing of equipment waste waters. Treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants. This oxygen loss can cause fish suffocation.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling

## 4.0 USE INFORMATION

This product, a water-soluble liquid, mixes readily with water and nonionic surfactant to be applied as a foliar spray for the control or destruction of many herbaceous and woody plants.

This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days but on most perennial brush species may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow the activity of this product and delay visual effects of control. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above-ground growth and deterioration of underground plant parts.

Unless otherwise directed on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "Weeds Controlled" section of this label. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials or brush will not be affected by the spray and will continue to grow. For this reason best control of most perennial weeds or brush is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per acre within the specific range when vegetation is heavy or dense.

Do not treat weeds or brush under poor growing conditions such as drought stress, disease or insect damage, as reduced control may result. Reduced results may also occur when treating weeds or brush heavily covered with dust.

Reduced control may result when applications are made to any weed or brush species that have been mowed, grazed or cut, and have not been allowed to regrow to the specific stage for treatment.

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the product off the foliage and a repeat treatment may be required.

When this product comes in contact with soil (on the soil surface or as suspended soil or sediment in water) it is bound to soil particles. Under use situations, once this product is bound to soil particles, it is not available for plant uptake and will not harm off-site vegetation where roots grow into the treatment area or if the soil is transported off-site. Under use conditions, the strong affinity of this product to soil particles prevents this product from leaching out of the soil profile and entering ground water. The affinity between this product and soil particles remains until this product is degraded, which is primarily a biological degradation process carried out under both aerobic and anaerobic conditions by soil microflora.

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

To the extent consistent with applicable law, the buyer and all users are responsible for all loss or damage in connection with the use or handling or mixtures of this product or other materials that are not expressly in this label. Mixing this product with herbicides or other materials not in this label may result in reduced performance.

#### USE RESTRICTIONS:

- For noncrop uses, the combined total of all treatments must not exceed 6.0 quarts of this product per acre per year.
- The maximum use rates stated throughout this product's labeling apply to this product combined with the use of all other herbicides containing glyphosate or sulfosate as the active ingredient, whether applied as mixtures or separately. Calculate application rates and ensure that the total use of this and other glyphosate or sulfosate containing products does not exceed stated maximum use rate.

#### ATTENTION

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift or splash onto desirable vegetation since minute quantities of this product can cause severe damage or destruction to the crop, plants or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product increases when winds are gusty, as wind velocity increases, when wind direction is constantly changing or when there are other meteorological conditions that favor spray drift. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift.

Keep container closed to prevent spills and contamination.

### **5.0 MIXING and APPLICATION INSTRUCTIONS**

Apply these spray solutions in properly maintained and calibrated equipment capable of delivering desired volumes. Hand-gun applications should be properly directed to avoid spraying desirable plants. Reduced results may occur if water containing soil is used, such as water from ponds and unlined ditches.

#### **5.1 Mixing**

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the labeled amount of this product near the end of the filling process and mix well. Use caution to avoid siphoning back into the carrier source. Use approved anti-back-siphoning devices where required by state or local regulations. During mixing and

application, foaming of the spray solution may occur. To prevent or minimize foam, avoid the use of mechanical agitators, terminate bypass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers must be no finer than 50 mesh. Carefully select correct nozzle to avoid spraying a fine mist. For best results with conventional ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

When using this product, mix 2.0 or more quarts of a nonionic surfactant per 100 gallons of spray solution. Use a nonionic surfactant labeled for use with herbicides. The surfactant must contain 50 percent or more active ingredient.

Always read and follow the manufacturer's surfactant label directions for best results. Carefully observe all cautionary statements and other information appearing in the surfactant label.

Do not use these surfactants in excess of 1.0 quart per acre when making broadcast applications.

Colorants or marking dyes approved for use with herbicides may be added to spray mixtures of this product. Colorants or dyes used in spray solutions of this product may reduce performance, especially at lower rates or dilutions. Use colorants or dyes according to the manufacturer's label directions. Clean sprayer and parts immediately after using this product by thoroughly flushing with water and dispose of rinsate according to labeled use or disposal instructions.

Observe all cautionary statements and other information appearing in the surfactant label.

## **6.0 APPLICATION EQUIPMENT AND TECHNIQUES**

### **6.1 Aerial Equipment**

Use the specified rates of this product and surfactant in 3.0 to 20.0 gallons of water per acre as a broadcast spray, unless otherwise specified. See the "Weeds Controlled" section of this label for specific rates. Aerial applications of this product may only be made as specified in this label.

Avoid drift - do not apply during inversion conditions, when winds are gusty or under any other condition which will allow drift. Drift may cause damage to any vegetation contacted to which treatment is not intended. To prevent injury to adjacent desirable vegetation, appropriate buffer zones must be maintained.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing in the additive label.

Ensure uniform application - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C 38413 may prevent corrosion.

### **6.2 Aerial Spray Drift Management**

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.
3. Where states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the [Aerial Drift Reduction Advisory](#).

### Aerial Drift Reduction Advisory

This section is advisory in nature and does not supersede the mandatory label requirements.

#### **Information on droplet size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

#### **Controlling droplet size**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - Orient nozzles so that the spray is released parallel to the airstream which produces larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **Boom length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **Application height**

Applications must not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### **Swath adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance must increase with increasing drift potential (higher wind, smaller drops, etc.)

#### **Wind**

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

#### **Temperature and humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

#### **Temperature inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## Sensitive areas

The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

### For Aerial Application in California Only

#### Aquatic and Other Noncrop Sites:

When applied as directed and under the conditions described in the "Weeds Controlled" section of this label booklet, this product will control or partially control the labeled weeds growing in the following industrial, recreational and public areas or other similar sites.

Aquatic Sites - Including all bodies of fresh and brackish water which may be flowing, nonflowing, or transient. This includes lakes, rivers, streams, ponds, seeps, irrigation and drainage ditches, canals, reservoirs, estuaries, and similar sites.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

There is no restriction on the use of treated water for irrigation, recreation, or domestic purposes. Consult local state fish and game agency and water control authorities before applying this product to public water. Permit may be required to treat such water.

#### RESTRICTIONS

Do not apply this product within ½ mile upstream of an active potable water intake in flowing water (i.e., river, stream, etc.) or within ½ mile of an active potable water intake in a standing body of water such as lake, pond, or reservoir. To make aquatic applications around and within ½ mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 part per million as determined by laboratory analysis. These aquatic applications may be made ONLY in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the application.

This product does not control plants which are completely submerged or have a majority of their foliage under water.

#### Aerial Applications:

Only make aerial applications with helicopters.

Use the following guidelines when aerial applications are to be made near perennial crops after bud break and before total leaf drop and/or near emerged annual crops.

1. Do not apply within a minimum of 100 feet of all crops.
2. If wind up to 5 miles per hour is blowing toward the crop(s), do not apply within a minimum of 500 feet of the crop(s).
3. Winds blowing from 5 to 10 miles per hour toward the crops(s) may require buffer zones in excess of the 500 feet minimum.
4. Do not apply when winds are in excess of 10 miles per hour or when inversion conditions exist. For Aerial Application in Fresno County, California Only From February 15 through March 31 Only

#### Applicable Area:

The area contained inside the following boundaries within Fresno County, California.

North: Fresno County line  
South: Fresno County line  
East: State Highway 99  
West: Fresno County line

#### Use Information:

Always read and follow the label directions, restrictions and precautionary statements for all products used in the aerial application.

Observe the following directions to minimize off-site movement during aerial application of this product.

Minimization of off-site movement is the responsibility of the grower, Pest Control Advisor and aerial applicator.

#### Written Recommendations:

A written recommendation **MUST** be submitted by or on behalf of the applicator to the Fresno County Agricultural Commissioner 24 hours prior to the application. This written recommendation **MUST** state the proximity of surrounding crops, and that conditions of each manufacturer's applicable product label and this label have been satisfied.

#### Aerial Applicator Training and Equipment:

Aerial application of this product is limited to pilots who have successfully completed a Fresno County Agricultural Commissioner and California Department of Pesticide Regulation approved training program for aerial application of herbicides. All aircraft must be inspected, critiqued in flight and certified at a Fresno County Agricultural Commissioner approved fly-in. Test and calibrate spray equipment at intervals sufficient to ensure that proper rates of herbicides and adjuvants are being applied during commercial use. Applicator must document such calibrations and testing. Demonstration of performance at Fresno County Agricultural Commissioner approved "fly-ins" constitutes such documentation, or other written records showing calculations and measurements of flight and spray parameters acceptable to the Fresno County Agricultural Commissioner.

#### Applications at Night:

Do not apply this product by air earlier than 30 minutes prior to sunrise and/or later than 30 minutes after sunset without prior permission from the Fresno County Agricultural Commissioner.

Note: For aerial application from April 1 through February 14, refer to the "For Aerial Application in California Only" section of this label

### **6.3 Boom Equipment**

For control of weed or brush species listed in this section using conventional boom equipment - Use the specified rates of this product and surfactant in 3.0 to 30.0 gallons of water per acre as a broadcast spray, unless otherwise specified. See the WEEDS CONTROLLED section of this label for specific rates. As density of vegetation increases, also increase spray volume within this range to ensure complete coverage. Carefully select correct nozzle to avoid spraying a fine mist. For best results with ground application equipment, use flat fan nozzles. Check for even distribution of spray droplets.

### **6.4 Hand-Held and High-Volume Equipment**

#### Use Coarse Sprays Only

For control of weeds listed in this section using knapsack sprayers or high-volume spraying equipment utilizing handguns or other suitable nozzle arrangements - Prepare a 0.75 to 2 percent solution of this product in water, add a nonionic surfactant and apply to foliage of vegetation to be controlled. For specific rates of application and instructions for control of various annual and perennial weeds, see the "Weeds Controlled" section of this label.

Make applications on a spray-to-wet basis. Assure that spray coverage is uniform and complete. Do not spray to point of runoff.

This product may be used as a 5 to 8 percent solution for low-volume directed sprays for spot treatment of trees and brush. It is most effective in areas where there is a low density of undesirable trees or brush.

If a straight stream nozzle is used, start the application at the top of the targeted vegetation and spray from top to bottom in a lateral zigzag motion. Ensure that at least 50 percent of the leaves are contacted by the spray solution. For flat fan and cone nozzles and with hand-directed mist blowers, mist the application over the foliage of the targeted vegetation. Small, open-branched trees need only be treated from one side. If the foliage is thick or there are multiple root sprouts, applications must be made from several sides to ensure adequate spray coverage.

Prepare the desired volume of spray solution by mixing the amount of this product in water, shown in the following table:

### Spray Solution

Desired Volume	Amount of Glypho 648					
	0.75%	1.0%	1.25%	1.5%	5.0%	8.0%
1.0 gal	1.0 fl oz	1.33 fl oz	1.66 fl oz	2.0 fl oz	6.5 fl oz	10.25 fl oz
25.0 gal	1.5 pt	1.0 qt	1.25 qt	1.5 qt	5.0 qt	2.0 gal
100 gal	3.0 qt	1.0 gal	1.25 gal	1.5 gal	5.0 gal	8.0 gal

2.0 tablespoons = 1.0 fluid ounce

For use in knapsack sprayers, it is suggested that the labeled amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution and add the correct amount of surfactant.

## 7.0 WEEDS CONTROLLED

### 7.1 Annual Weeds

Apply to actively growing annual grasses and broadleaf weeds.

Allow at least 3 days after application before disturbing treated vegetation. After this period the weeds may be mowed, tilled or burned. See "Directions for Use," "Use Information" and "Mixing and Application Instructions" for labeled uses and specific application instructions.

Broadcast Application - Use 1.5 pints of this product per acre plus 2.0 or more quarts of a nonionic surfactant per 100 gallons of spray solution if weeds are less than 6 inches tall. If weeds are greater than 6 inches tall, use 2.5 pints of this product per acre plus 2.0 or more quarts of an approved nonionic surfactant per 100 gallons of spray solution.

Hand-Held, High-Volume Application - Use a 0.75 percent solution of this product in water plus 2.0 or more quarts of a nonionic surfactant per 100 gallons of spray solution and apply to foliage of vegetation to be controlled.

When applied as directed under the conditions described in this label, this product plus nonionic surfactant will control the following annual weeds:

Balsamapple** <i>Momordica charantia</i>	Foxtail, Carolina <i>Alopecurus carolinianus</i>	Rye <i>Secale cereale</i>
Barley <i>Hordeum vulgare</i>	Groundsel, common <i>Senecio vulgaris</i>	Ryegrass, Italian* <i>Lolium multiflorum</i>
Barnyardgrass <i>Echinochloa crus-galli</i>	Horseweed/Marestail <i>Conyza canadensis</i>	Sandbur, field <i>Cenchrus spp.</i>
Bassia, fivehook <i>Bassia hyssopifolia</i>	Kochia <i>Kochia scoparia</i>	Shattercane <i>Sorghum bicolor</i>
Bluegrass, annual <i>Poa annua</i>	Lambsquarters, common <i>Chenopodium album</i>	Shepherdspurse <i>Capsella bursa-pastoris</i>
Bluegrass, bulbous <i>Poa bulbosa</i>	Lettuce, prickly <i>Lactuca serriola</i>	Signalgrass, broadleaf <i>Brachiaria platyphylla</i>
Brome <i>Bromus spp.</i>	Morningglory <i>Ipomoea spp.</i>	Smartweed, Pennsylvania <i>Polygonum pensylvanicum</i>
Buttercup <i>Ranunculus spp.</i>	Mustard, blue <i>Chorispora tenella</i>	Sowthistle, annual <i>Sonchus oleraceus</i>
Cheat <i>Bromus secalinus</i>	Mustard, tansy <i>Descurainia pinnata</i>	Spanishneedles* <i>Bidens bipinnata</i>
Chickweed, mouseear <i>Cerastium vulgatum</i>	Mustard, tumble <i>Sisymbrium altissimum</i>	Stinkgrass <i>Eragrostis cilianensis</i>
Cocklebur <i>Xanthium strumarium</i>	Mustard, wild <i>Sinapis arvensis</i>	Sunflower <i>Helianthus annuus</i>
Corn, volunteer <i>Zea mays</i>	Oats, wild <i>Avena fatua</i>	Thistle, Russian <i>Salsola kali</i>

Crabgrass <i>Digitaria spp.</i>	Panicum <i>Panicum spp.</i>	Spurry, umbrella <i>Holosteum umbellatum</i>
Dwarf dandelion <i>Krigia cespitosa</i>	Pennycress, field <i>Thlaspi arvense</i>	Velvetleaf <i>Abutilon theophrasti</i>
False flax, smallseed <i>Camelina microcarpa</i>	Pigweed, redroot <i>Amaranthus retroflexus</i>	Wheat <i>Triticum aestivum</i>
Fiddleneck <i>Amsinckia spp.</i>	Pigweed, smooth <i>Amaranthus hybridus</i>	Witchgrass <i>Panicum capillare</i>
Flaxleaf fleabane <i>Conyza bonariensis</i>	Ragweed, common <i>Ambrosia artemisiifolia</i>	
Fleabane <i>Erigeron spp.</i>	Ragweed, giant <i>Ambrosia trifida</i>	
Foxtail <i>Setaria spp.</i>	Rocket, London <i>Sisymbrium irio</i>	

\*Apply 3.0 pints of this product per acre.

\*\*Apply with hand-held equipment only.

Annual weeds will generally continue to germinate from seed throughout the growing season. Repeat treatments will be necessary to control later germinating weeds.

## 7.2 Perennial Weeds

Apply this product as follows to control or destroy most vigorously growing perennial weeds. Unless otherwise directed, allow at least 7 days after application before disturbing vegetation.

Add 2.0 or more quarts of a nonionic surfactant per 100 gallons of spray solution to the rates of this product given in this list. See the Use Information, Directions for Use and Mixing and Application sections in this label for specific uses and application instructions.

NOTE: If weeds have been mowed or tilled, do not treat until regrowth has reached the recommended stages.

RESTRICTION: Fall treatments must be applied before a killing frost.

A second application may be necessary to control weeds regenerating from underground parts or seed. When applied as directed under the conditions described, this product plus surfactant will control the following perennial weeds:

Alfalfa <i>Medicago sativa</i>	Cordgrass <i>Spartina spp.</i>	Lespedeza: common, serices <i>Lespedeza striata</i>
Alligatorweed* <i>Alternanthera philoxeroides</i>	Cutgrass, giant* <i>Zizaniopsis miliacea</i>	<i>Lespedeza cuneata</i>
Anise/Fennel <i>Foeniculum vulgare</i>	Dallisgrass <i>Paspalum dilatatum</i>	Loosestrife, purple <i>Lythrum salicaria</i>
Artichoke, Jerusalem <i>Helianthus tuberosus</i>	Dandelion <i>Taraxacum officinale</i>	Lotus, American <i>Nelumbo lutea</i>
Bahiagrass <i>Paspalum notatum</i>	Dock, curly <i>Rumex crispus</i>	Maidencane <i>Panicum hematomon</i>
Beachgrass, European*** <i>Ammophila arenaria</i>	Dogbane, hemp <i>Apocynum cannabinum</i>	Milkweed <i>Asclepias spp.</i>
Bermudagrass <i>Cynodon dactylon</i>	Fescue <i>Festuca spp.</i>	Muhly, wirestem <i>Muhlenbergia frondosa</i>
Bindweed, field <i>Convolvulus arvensis</i>	Fescue, tall <i>Festuca arundinacea</i>	Mullein, common <i>Verbascum thapsus</i>
Bluegrass, Kentucky <i>Poa pratensis</i>	Guineagrass <i>Panicum maximum</i>	Napiergrass <i>Pennisetum purpureum</i>
Blueweed, Texas <i>Helianthus ciliaris</i>	Hemlock, poison <i>Conium maculatum</i>	Nightshade, silverleaf <i>Solanum elaeagnifolium</i>
Brackenfern <i>Pteridium spp.</i>	Horsenettle <i>Solanum carolinense</i>	Nutsedge: purple, yellow <i>Cyperus rotundus</i> <i>Cyperus esculentus</i>
Bromegrass, smooth <i>Bromus inermis</i>	Horseradish <i>Armoracia rusticana</i>	Orchardgrass <i>Dactylis glomerata</i>
Canarygrass, reed <i>Phalaris arundinacea</i>	Ice Plant <i>Mesembryanthemum crystallinum</i>	Pampasgrass <i>Cortaderia jubata</i>
Cattail <i>Typha spp.</i>	Johnsongrass <i>Sorghum halepense</i>	Paragrass <i>Brachiaria mutica</i>
Clover, red <i>Trifolium pratense</i>	Kikuyugrass <i>Pennisetum clandestinum</i>	Phragmites** <i>Phragmites spp.</i>
Clover, white <i>Trifolium repens</i>	Knapweed <i>Centaurea repens</i>	
Cogongrass <i>Imperata cylindrica</i>	Lantana <i>Lantana camara</i>	
Quackgrass <i>Agropyron repens</i>	Timothy <i>Phleum pratense</i>	
Reed, giant <i>Arundo donax</i>	Torpedograss* <i>Panicum repens</i>	
Ryegrass, perennial <i>Lolium perenne</i>	Tules, common <i>Scirpus acutus</i>	
Smartweed, swamp <i>Polygonum coccineum</i>	Vaseygrass <i>Paspalum urvillei</i>	
Spatterdock <i>Nuphar luteum</i>	Velvetgrass <i>Holcus spp.</i>	
Starthistle, yellow <i>Centaurea solstitialis</i>	Waterhyacinth <i>Eichornia crassipes</i>	
Sweet potato, wild* <i>Ipomoea pandurata</i>	Waterlettuce <i>Pistia stratiotes</i>	
Thistle, artichoke <i>Cynara cardunculus</i>	Waterprimrose <i>Ludwigia spp.</i>	
Thistle, Canada <i>Cirsium arvense</i>	Wheatgrass, western <i>Agropyron smithii</i>	

\*Partial control.

\*\*Partial control in southeastern states.

See specific instructions below.

\*\*\*Washington and Oregon only.

**Alligatorweed** – Apply 6.0 pints of this product per acre as a broadcast spray or as a 1.25 percent solution with handheld equipment to provide partial control of alligatorweed. Apply when most of the target plants are in bloom. Repeat applications will be required to maintain such control.

**Beachgrass, European (Washington and Oregon only)** – Best results are obtained when applications are made when European beachgrass is actively growing through the boot to the full heading stages of growth. Make applications prior to the loss of more than 50% green leaf color in the fall. Applications made during any period of plant (drought) stress, or beyond the recommended active growth period in the fall, will likely result in reduced performance.

Repeat applications of Glypho 648 may be necessary to treat skips. Monitor treated acres prior to reseeding of desirable vegetation.

*Spray-to-Wet Applications:*

Apply an 8 percent solution of this product plus 0.5 to 1.5 percent nonionic surfactant on a spray-to-wet basis for control of European beachgrass.

Assure that spray coverage is uniform and complete but not to the point of runoff.

*Wiper Applications:*

For selective control of European beachgrass, apply a 33.33 percent solution of this product plus 1 to 2.5 percent nonionic surfactant during active growth. Avoid contact of herbicide solution with desirable vegetation. Wiping the plants in opposite directions may improve performance. Maximizing the amount of individual leaf tissue contacted with the wiping equipment will result in optimal performance.

**Bermudagrass** – Apply 7.5 pints of this product per acre as a broadcast spray or as a 1.5 percent solution with handheld equipment. Apply when target plants are actively growing and when seed heads appear.

**Bindweed, field/Silverleaf Nightshade/Texas Blueweed** – Apply 6.0 to 7.5 pints of this product per acre as a broadcast spray west of the Mississippi River and 4.5 to 6.0 pints of this product per acre east of the Mississippi River. With hand-held equipment, use a 1.5 percent solution. Apply when target plants are actively growing and are at or beyond full bloom. For silverleaf nightshade, best results can be obtained when application is made after berries are formed. Do not treat when weeds are under drought stress. New leaf development indicates active growth. For best results apply in late summer or fall.

**Brackenfern** – Apply 4.5 to 6.0 pints of this product per acre as a broadcast spray or as a 0.75 to 1 percent solution with hand-held equipment. Apply to fully expanded fronds which are at least 18 inches long.

**Cattail** – Apply 4.5 to 6.0 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with handheld equipment. Apply when target plants are actively growing and are at or beyond the early-to-full bloom stage of growth. Best results are achieved when application is made during the summer or fall months.

**Cogongrass** – Apply 4.5 to 7.5 pints of this product per acre as a broadcast spray. Apply when cogongrass is at least 18 inches tall and actively growing in late summer or fall. Allow 7 or more days after application before tillage or mowing. Due to uneven stages of growth and the dense nature of vegetation preventing good spray coverage, repeat treatments may be necessary to maintain control.

**Cordgrass** – Broadcast Applications (Air) – Apply 4.0 to 7.5 pints of this product in 5.0 to 20.0 gallons of spray solution per acre. Add 1.0 to 2.0 quarts of nonionic surfactant per 100 gallons of spray solution.

Broadcast Applications (Ground) – Apply 4.0 to 7.5 pints of this product in 10.0 to 60.0 gallons of spray solution per acre. For best results, ensure that complete coverage of cordgrass clumps is achieved. Add 1.0 to 2.0 quarts of a nonionic surfactant per 100 gallons of spray solution.

Hand-Held and High Volume Equipment - Apply a 2 to 8 percent solution of this product. Ensure that complete coverage of cordgrass clumps is achieved. Do not spray to the point of run-off. Add 1.0 to 2.0 quarts of a nonionic surfactant per 100 gallons of spray solution.

Wiper Applications - For wick or wiper applications, mix 1.0 gallon of this product with 2.0 gallons of clean water to make a 33 percent solution. Addition of a nonionic surfactant at a rate of 10 percent by volume of the total herbicide solution is recommended.

In heavy stands, a double application in opposite directions may improve results.

Application Conditions - Schedule applications in order to allow 6 hours before treated plants are covered by tidewater. Rainfall or immersion within 6 hours after application may reduce effectiveness.

The presence of debris and silt on the cordgrass plants will reduce performance of this product. It may be necessary to wash targeted plants prior to application to improve uptake of this product into the plant. Where cordgrass has been cut or mowed prior to application with Glypho 648, ensure adequate regrowth of cordgrass occurs to allow for interception or absorption of the herbicide solution.

**Cutgrass, giant** – Apply 6.0 pints of this product per acre as a broadcast spray or as a 1 percent solution with handheld equipment to provide partial control of giant cutgrass. Repeat applications will be required to maintain such control, especially where vegetation is partially submerged in water. Allow for substantial regrowth to the 7 to 10-leaf stage prior to retreatment.

**Dogbane, hemp/Knapweed/Horseradish** – Apply 6.0 pints of this product per acre as a broadcast spray or as a 1.5 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the late bud-to-flower stage of growth. For best results, apply in late summer or fall.

**Fescue, tall** – Apply 4.5 pints of this product per acre as a broadcast spray or as a 1 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the boot-to-head stage of growth. When applied prior to the boot stage, less desirable control may be obtained.

**Guineagrass** – Apply 4.5 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with handheld equipment. Apply when target plants are actively growing and when most have reached at least the 7-leaf stage of growth.

**Johnsongrass/Bluegrass, Kentucky/Bromegrass, smooth/Canarygrass, reed/Orchardgrass/Ryegrass, perennial/Timothy/Wheatgrass, western** – Apply 3.0 to 4.5 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the boot-to-head stage of growth. When applied prior to the boot stage, less desirable control may be obtained. In the fall, apply before plants have turned brown.

**Lantana** – Apply this product as a 0.75 to 1 percent solution with hand-held equipment. Apply to actively growing lantana at or beyond the bloom stage of growth. Use the higher application rate for plants that have reached the woody stage of growth.

**Loosestrife, purple** – Apply 4.0 pints of this product per acre as a broadcast spray or as a 1 to 1.5 percent solution using hand-held equipment. Treat when plants are actively growing at or beyond the bloom stage of growth. Best results are achieved when application is made during summer or fall months. Fall treatments must be applied before a killing frost.

**Lotus, American** – Apply 4.0 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with hand-held equipment. Treat when plants are actively growing at or beyond the bloom stage of growth. Best results are achieved when application is made during summer or fall months. Fall treatments must be applied before a killing frost. Repeat treatment may be necessary to control regrowth from underground parts and seeds.

**Maidencane/Paragrass** – Apply 6.0 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with hand-held equipment. Repeat treatments will be required, especially to vegetation partially submerged in water. Under these conditions, allow for regrowth to the 7 to 10-leaf stage prior to retreatment.

**Milkweed, common** – Apply 4.5 pints of this product per acre as a broadcast spray or as a 1.5 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached the late bud-to-flower stage of growth.

**Nutsedge: purple, yellow** – Apply 4.5 pints of this product per acre as a broadcast spray, or as a 0.75 percent solution with hand-held equipment to control existing nutsedge plants and immature nutlets attached to treated plants. Apply when target plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for longterm control.

**Pampasgrass** – Apply a 1.5 percent solution of this product with hand-held equipment when plants are actively growing.

**Phragmites** – For partial control of phragmites in Florida and the counties of other states bordering the Gulf of Mexico, apply 7.5 pints per acre as a broadcast spray or apply a 1.5 percent solution with hand-held equipment. In other areas of the U.S., apply 4.0 to 6.0 pints per acre as a broadcast spray or apply a 0.75 percent solution with hand-held equipment for partial control. For best results, treat during late summer or fall months when plants are actively growing and in full bloom. Due to the dense nature of the vegetation, which may

prevent good spray coverage and uneven stages of growth, repeat treatments may be necessary to maintain control. Visual control symptoms will be slow to develop.

**Quackgrass/Kikuyugrass/Muhly, wirestem** – Apply 3.0 to 4.5 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with hand-held equipment when most quackgrass or wirestem muhly is at least 8 inches in height (3 to 4-leaf stage of growth) and actively growing. Allow 3 or more days after application before tillage.

**Reed, giant/ice plant** – For control of giant reed and ice plant, apply a 1.5 percent solution of this product with handheld equipment when plants are actively growing. For giant reed, best results are obtained when applications are made in late summer or fall.

**Spatterdock** – Apply 6.0 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with handheld equipment. Apply when most plants are in full bloom. For best results, apply during the summer or fall months.

**Sweet potato, wild** – Apply this product as a 1.5 percent solution using hand-held equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the recommended stage of growth before retreatment.

**Thistle: Canada, artichoke** – Apply 3.0 to 4.5 pints of this product per acre as a broadcast spray or as a 1.5 percent solution with hand-held equipment for Canada thistle. To control artichoke thistle, apply a 2 percent solution as a spray-to-wet application. Apply when target plants are actively growing and at or beyond the bud stage of growth.

**Torpedograss** – Apply 6.0 to 7.5 pints of this product per acre as a broadcast spray or as a 0.75 to 1.5 percent solution with hand-held equipment to provide partial control of torpedograss. Use the lower rates under terrestrial conditions, and the higher rates under partially submerged or a floating mat condition. Repeat treatments will be required to maintain such control.

**Tules, common** – Apply this product as a 1.5 percent solution with hand-held equipment. Apply to actively growing plants at or beyond the seedhead stage of growth. After application, visual symptoms will be slow to appear and may not occur for 3 or more weeks.

**Water hyacinth** – Apply 5.0 to 6.0 pints of this product per acre as a broadcast spray or apply a 0.75 to 1 percent solution with hand-held equipment. Apply when target plants are actively growing and at or beyond the early bloom stage of growth. After application, visual symptoms may require 3 or more weeks to appear with complete necrosis and decomposition usually occurring within 60 to 90 days. Use the higher rates when more rapid visual effects are desired.

**Waterlettuce** – For control, apply a 0.75 to 1 percent solution of this product with hand-held equipment to actively growing plants. Use higher rates where infestations are heavy. Best results are obtained from mid-summer through winter applications. Spring applications may require retreatment.

**Waterprimrose** – Apply this product as a 0.75 percent solution using hand-held equipment. Apply to plants that are actively growing at or beyond the bloom stage of growth, but before fall color changes occur. Thorough coverage is necessary for best control.

**Other perennials listed on this label** – Apply 4.5 to 7.5 pints of this product per acre as a broadcast spray or as a 0.75 to 1.5 percent solution with hand-held equipment. Apply when target plants are actively growing and most have reached early head or early bud stage of growth.

### 7.3 Woody Brush and Trees

When applied as directed under the conditions described, this product plus surfactant CONTROLS or PARTIALLY CONTROLS the following woody brush plants and trees:

Alder	Broom:
<i>Alnus spp.</i>	Scotch
Ash*	<i>Cytisus scoparius</i>
<i>Fraxinus spp.</i>	Buckwheat, California*
Aspen, quaking	<i>Eriogonum fasciculatum</i>
<i>Populus tremuloides</i>	Cascara*
Bearclover, Bearmat	<i>Rhamnus purshiana</i>
<i>Chamaebatia foliolosa</i>	Catsclaw*
	<i>Acacia greggi</i>

Birch	Ceanothus
<i>Betula spp.</i>	<i>Ceanothus spp.</i>
Blackberry	Chamise
<i>Rubus spp.</i>	<i>Adenostoma fasciculatum</i>
Broom:	
French	Maple:
<i>Cytisus monspessulanus</i>	Red**
Cherry:	<i>Acer rubrum</i>
Bitter	Sugar
<i>Prunus emarginata</i>	<i>Acer saccharum</i>
Black	Vine*
<i>Prunus serotina</i>	<i>Acer circinatum</i>
Pin	Monkey Flower*
<i>Prunus pensylvanica</i>	<i>Mimulus guttatus</i>
Coyote brush	Oak:
<i>Baccharis consanguinea</i>	Black*
Creeper, Virginia*	<i>Quercus velutina</i>
<i>Parthenocissus quinquefolia</i>	Northern pine
Dewberry	<i>Quercus palustris</i>
<i>Rubus trivialis</i>	Post
Dogwood	<i>Quercus stellata</i>
<i>Cornus spp.</i>	Red
Elderberry	<i>Quercus rubra</i>
<i>Sambucus spp.</i>	Southern red
Elm*	<i>Quercus falcata</i>
<i>Ulmus spp.</i>	White*
Eucalyptus, bluegum	<i>Quercus alba</i>
<i>Eucalyptus globules</i>	
	Persimmon*
Hasardia*	<i>Diospyros spp.</i>
<i>Haplopappus squamosus</i>	
Hawthorn	Poison Ivy
<i>Crataegus spp.</i>	<i>Rhus radicans</i>
Hazel	Poison Oak
<i>Corylus spp.</i>	<i>Rhus toxicodendron</i>
Hickory	Poplar, yellow*
<i>Carya spp.</i>	<i>Liriodendron tulipifera</i>
Holly, Florida; Brazilian Peppertree	Prunus
<i>Schinus terebinthifolius</i>	<i>Prunus spp.</i>
Honeysuckle	Raspberry
<i>Lonicera spp.</i>	<i>Rubus spp.</i>
Hornbeam, American	Redbud, eastern
<i>Carpinus caroliniana</i>	<i>Cercis canadensis</i>
Kudzu	Rose, multiflora
<i>Pueraria lobata</i>	<i>Rosa multiflora</i>
Locust, black*	Russian-olive
<i>Robinia pseudoacacia</i>	<i>Elaeagnus angustifolia</i>
Manzanita	Sweet gum
<i>Arctostaphylos spp.</i>	<i>Liquidambar styraciflua</i>
Sage: black, white	Swordfern*
<i>Salvia spp.</i>	<i>Polystichum munitum</i>
Sagebrush, California	Tallowtree, Chinese
<i>Artemisia californica</i>	<i>Sapium sebiferum</i>

Salmonberry <i>Rubus spectabilis</i>	Thimbleberry <i>Rubus parviflorus</i>
Salt cedar* <i>Tamarix spp.</i>	Tobacco, tree* <i>Nicotiana glauca</i>
Saltbush, Sea myrtle <i>Baccharis halimifolia</i>	Trumpet creeper <i>Campsis radicans</i>
Sassafras <i>Sassafras albidum</i>	Waxmyrtle, southern* <i>Myrica cerifera</i>
Sourwood* <i>Oxydendrum arboreum</i>	Willow <i>Salix spp.</i>
Sumac:	
Poison* <i>Rhus vernix</i>	*Partial Control
Smooth* <i>Rhus glabra</i>	**See below for control or partial control instruction.
Winged* <i>Rhus copallina</i>	

NOTE: If brush has been mowed or tilled or trees have been cut, do not treat until regrowth has reached the recommended stage of growth.

Apply the directed rate of this product plus 2.0 or more quarts of a nonionic surfactant per 100 gallons of spray solution when plants are actively growing and, unless otherwise directed, after full-leaf expansion. Use the higher rate for larger plants and/or dense areas of growth. On vines, use the higher rate for plants that have reached the woody stage of growth. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when application is made in the spring or early summer when brush species are at high moisture content and are flowering. Ensure thorough coverage when using hand-held equipment. Symptoms may not appear prior to frost or senescence with fall treatment.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a frost.

See the Use Directions and Mixing and Application Instructions sections in this label for labeled use and specific application instructions.

Applied as a 5 to 8 percent solution as a directed application as described in the "Hand-Held and High- Volume Equipment" section, this product will control or partially control all species listed in this section of this label. Use the higher rate of application for dense stands and larger woody brush and trees.

Apply the product as follows to control or partially control the following woody brush and trees.

**Alder/Blackberry/Dewberry/Honeysuckle/Oak, Post/Raspberry** – For control, apply 4.5 to 6.0 pints per acre as a broadcast spray or as a 0.75 to 1.25 percent solution with hand-held equipment.

**Aspen, Quaking/Hawthorn/Trumpet creeper** – For control, apply 3.0 to 4.25 pints of this product per acre as a broadcast spray or as a 0.75 to 1.25 percent solution with hand-held equipment.

**Birch/Elderberry/Hazel/Salmonberry/Thimbleberry** – For control, apply 3.0 pints per acre of this product as a broadcast spray or as a 0.75 percent solution with hand-held equipment.

**Broom: French, Scotch** – For control, apply a 1.25 to 1.5 percent solution with hand-held equipment.

**Buckwheat, California/Hasardia/Monkey Flower/Tobacco, Tree** – For partial control of these species, apply a 0.75 to 1.5 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

**Catsclaw** – For partial control, apply a 1.25 to 1.5 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Cherry: Bitter, Black, Pin/Oak, Southern Red/Sweet Gum/Prunus** – For control, apply 3.0 to 7.5 pints of this product per acre as a broadcast spray or as a 1.0 to 1.5 percent solution with hand-held equipment.

**Coyote brush** – For control, apply a 1.25 to 1.5 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Dogwood/Hickory/Salt cedar** – For partial control, apply a 1 to 2 percent solution of this product with hand-held equipment or 6.0 to 7.5 pints per acre as a broadcast spray.

**Eucalyptus, bluegum** – For control of eucalyptus resprouts, apply a 1.5 percent solution of this product with handheld equipment when resprouts are 6 to 12-feet tall. Ensure complete coverage. Apply when plants are actively growing. Avoid application to drought-stressed plants.

**Holly, Florida (Brazilian peppertree (*Schinus terebinthifolius*))** – For partial control, apply this product as a 1.5 percent solution with hand-held equipment.

Alternatively, when applied as directed, this product with QuikSorb™ Penetrant will control or partially control Brazilian peppertree in areas such as dry drainage ditches and canals, wildlife habitat restoration and management areas, roadsides, railroads, fence rows, and similar non-crop areas.

Do not apply to Brazilian peppertree growing in water. Treat Brazilian peppertree with a directed spot treatment using hand held equipment such as a backpack sprayer. Use flat fan, cone, or similar nozzles that will provide effective spray coverage of target vegetation. Do not use aerial, boom-type or other broadcast spray equipment. These applications are more effective on small brush less than 15 feet in height or 3-inch stem diameter.

#### *Basal and Selective Stem Application:*

Apply a solution consisting of 25% v/v of this product and 75% v/v of QuikSorb™ penetrant. Completely cover the lower 18 to 24 inches of the brush stems or trunks. For larger stems over 3 inches in diameter, treat up to 48 inches or higher from the ground level. For better control of large trees, apply spray solution directly to upper foliage of plant canopy. Make spray coverage uniform, covering at least 40 to 60% of the upper foliage and stems. Application is best when made to young, actively growing stems, branches and foliage. Spray-to-wet but not to the point of run-off.

Read and carefully observe the label claims, cautionary statements, and all information on the labels of all products used in this tank mixture.

**Kudzu** – For control, apply 6.0 pints of this product per acre as a broadcast spray or as a 1.5 percent solution with hand-held equipment. Repeat applications will be required to maintain control.

**Maple, Red** – For control, apply as a 0.75 to 1.25 percent solution with hand-held equipment when leaves are fully developed. For partial control, apply 2.0 to 7.5 pints of this product per acre as a broadcast spray.

**Maple, Sugar/Oak: Northern Pin, Red** – For control, apply as a 0.75 to 1.25 percent solution with hand-held equipment when at least 50 percent of the new leaves are fully developed.

**Poison Ivy/Poison Oak** – For control, apply 6.0 to 7.5 pints of this product per acre as a broadcast spray or as a 1.5 percent solution with hand-held equipment. Repeat applications may be required to maintain control. Fall treatments must be applied before leaves lose green color.

**Rose, multiflora** – For control, apply 3.0 pints of this product per acre as a broadcast spray or as a 0.75 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

**Sage, black/Sagebrush, California/Chamise/Tallowtree, Chinese** – For control of these species apply as a 0.75 percent solution of this product as a foliar spray with hand-held equipment. Thorough coverage of foliage is necessary for best results.

**Saltbush, Sea myrtle** – For control, apply this product as a 1 percent solution with hand-held equipment. Waxmyrtle, southern – For partial control, apply this product as a 1.5 percent solution with hand-held equipment.

**Willow** – For control, apply 4.5 pints of this product per acre as a broadcast spray or as a 0.75 percent solution with hand-held equipment.

**Other woody brush and trees listed in this label** – For partial control, apply 3.0 to 7.5 pints of this product per acre as a broadcast spray or as a 0.75 to 1.5 percent solution with hand-held equipment.

## 8.0 AQUATIC AND OTHER NONCROP SITES

When applied as directed and under the conditions described in the Weeds Controlled section in this label, this product will control or partially control the labeled weeds growing in the following industrial, recreational and public areas or other similar aquatic and terrestrial sites.

**RESTRICTION:** When applying this product directly to water the use of surfactants must only be used if the surfactant is known to be non-toxic to aquatic species.

**Aquatic Sites** - This product may be applied to emerged weeds in all bodies of fresh and brackish water which may be flowing, nonflowing or transient. This includes lakes, rivers, streams, ponds, estuaries, seeps, irrigation and drainage ditches, canals, reservoirs, wastewater treatment facilities, wildlife habitat restoration and management areas.

If aquatic sites are present in the noncrop area and are part of the intended treatment, read and observe the following directions:

- This product does not control plants which are completely submerged or have a majority of their foliage under water.
- There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.
- Consult local state fish and game agency and water control authorities before applying this product to public water. Permits may be required to treat such water.
- For treatments after drawdown of water or in dry ditches, allow 7 or more days after treatment before reintroduction of water to achieve maximum weed control. Apply this product within 1 day after drawdown to ensure application to actively growing weeds.
- Floating mats of vegetation may require retreatment. Avoid wash-off of sprayed foliage by spray boat or recreational boat backwash or by rainfall within 6 hours of application. Do not re-treat within 24 hours following the initial treatment.
- Applications made to moving bodies of water must be made while traveling upstream to prevent concentration of this herbicide in water. When making any bankside applications, do not overlap more than 1 foot into open water. Do not spray in bodies of water where weeds do not exist. The maximum application rate of 7.5 pints per acre must not be exceeded in any single broadcast application that is being made over water.
- When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid oxygen depletion due to decaying vegetation. Oxygen depletion may result in fish kill.

**RESTRICTIONS:**

- Do not apply this product directly to water within ½ mile up-stream of an active potable water intake in flowing water (i.e., river stream, etc.) or within ½ mile of an active potable water intake in a standing body of water such as lake, pond or reservoir.
- To make aquatic applications around and within ½ mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after application.
- The water intake may be turned on prior to 48 hours if the glyphosate level in the intake water is below 0.7 parts per million as determined by laboratory analysis.
- These aquatic applications may be made ONLY in those cases where there are alternative water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the applications. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.

### OTHER NONCROP TYPE SITES

This product may be used to control the listed weeds in terrestrial noncrop sites and/or in aquatic sites within these areas.

Airports, Golf Courses, Habitat Restoration and Management Areas Highways and Roadsides, Industrial Plant Sites, Lumberyards, Parking Areas, Parks, Petroleum Tank Farms, Pipeline, Power, Telephone and Utility Rights-of-Way, Pumping Installations, Railroads, School Grounds, and Storage Areas.

## TANK MIXTURES

NOTE: Read and carefully observe the label directions, cautionary statements and all information on the labels of products used in these tank mixtures before proceeding with these directions.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When used in combination as directed by Loveland Products, Inc. to the extent consistent with applicable law, the liability of Loveland Products, Inc., shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the Loveland Products, Inc. product in such combination use.

### This product plus GARLON® 4

For burndown and partial control or suppression of woody brush and weeds in industrial sites:

When applied as directed for "Noncrop Uses" under the conditions described, this product, and an approved surfactant plus Garlon® 4, provides burndown and partial control or suppression of woody brush and vegetation labeled for this product. This tank mixture is recommended for use on rights-of-way (utility, railroad, highway, pipeline), fencerows, roadsides, nonirrigation ditchbanks, wasteland and industrial sites. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Hand-Held and High-Volume Applications:

Use 3.0 to 6.0 pints of this product and 2.0 or more quarts of an approved surfactant, plus the labeled rate of Garlon® 4 per 100 gallons of spray solution and apply to foliage of actively growing woody brush and weeds. Make applications on a spray to wet basis. Assure that spray coverage is uniform and complete. Do not spray to point of runoff.

Broadcast Applications with Ground Equipment:

Use 3.0 to 6.0 pints of this product plus the labeled rate of Garlon® 4 in sufficient water and make 20.0 to 100 gallons of total spray per acre. Use 2.0 to 4.0 quarts of an approved surfactant per 100 gallons of spray solution with this product.

Aerial Application (Helicopter Only):

Use 3.0 to 6.0 pints of this product plus surfactant plus the labeled rate of Garlon® 4 and apply in a total spray volume of 10.0 to 20.0 gallons per acre. Apply aerial sprays using suitable drift control. Use 2.0 to 4.0 quarts of an approved surfactant per 100 gallons of spray solution with this product.

Apply when plants are actively growing and after full leaf expansion of woody brush. Use the higher rates of these products where vegetation is heavy or dense, or where hard-to-control brush species are prevalent. Repeat applications may be necessary to maintain control and to suppress areas where canopied vegetation prevents good spray coverage and penetrations.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

### This product plus ARSENAL® 2 WSL

When applied as directed, this tank mixture will control or partially control labeled woody brush, trees and herbaceous weeds in noncrop areas. In addition to the weeds listed on this label, this tank mixture will control arrowweed, salt cedar and yaupon. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Hand-Held and High-Volume Applications:

Use 6.0 to 12.0 pints of this product plus the labeled rate of Arsenal® 2 WSL per 100 gallons of spray solution. Add 2.0 to 4.0 quarts of nonionic surfactant per 100 gallons of spray solution.

Apply to foliage of actively growing vegetation. Make applications on a spray-to-wet basis. Assure that spray coverage is uniform and complete. Do not spray to the point of runoff.

#### Broadcast Applications with Ground Equipment:

Use 3.0 to 7.5 pints of this product plus the labeled rate of Arsenal® 2 WSL in sufficient water to apply in a total spray volume of 10.0 to 20.0 gallons per acre. Add 2.0 to 4.0 quarts of nonionic surfactant per 100 gallons of spray solution. Apply to foliage of actively growing vegetation.

Apply to woody brush and trees after full leaf expansion until initiation of fall color. Avoid direct applications to any body of water.

#### RESTRICTION:

- Do not apply on ditches used to transport irrigation water.

#### This product plus 2,4-D AMINE

When applied as a tank mixture, this product will control the annual weeds listed in this label booklet. This tank mixture will control or partially control the listed perennial weeds, woody brush and trees. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Use 1.5 to 2.5 pints of this product plus the labeled rate of 2,4-D amine (labeled for aquatic sites) for control of annual weeds.

Use 3.0 to 7.5 pints of this product plus the labeled rate of 2,4-D amine (labeled for aquatic sites) for control or partial control of perennial weeds, woody brush and trees. The tank mixture may be used on Alligatorweed, Smartweed, Waterprimrose, Waxmyrtle and other labeled weeds.

When using this product, mix 2.0 or more quarts of a nonionic surfactant per 100 gallons of spray solution.

Always read and follow the surfactant manufacturer's label directions.

Always predetermine the compatibility of the tank mixtures of this herbicide and 2,4-D amine by mixing small proportional quantities in advance.

Mix in the following sequence: Fill sprayer tank one-half full with water, add this product, then 2,4-D amine and finally surfactant. Fill sprayer tank to final volume with water.

#### RESTRICTIONS:

- Do not mix this product amine concentrates without water carrier.
- Do not mix this product and 2,4-D amine in bypass injector-type spray equipment.

## 9.0 WETLAND SITES

This product may be used in and around water (aquatic areas) and wetlands found in forestry and in power, telephone and pipeline rights-of-way sites, including where these sites are adjacent to or surrounding domestic water supply reservoirs, supply streams, lakes and ponds. Read and observe the following before making applications in and around water.

Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat in such areas.

There is no restriction on the use of treated water for irrigation, recreation or domestic purposes.

#### RESTRICTIONS:

- Do not apply this product directly to water within ½ mile up-stream of an active potable water intake in flowing water (i.e., river, stream, etc.) or within ½ mile of an active potable water intake in a standing body of water such as lake, pond or reservoir. To make aquatic applications around and within ½ mile of active potable water intakes, the water intake must be turned off for a minimum period of 48 hours after the application. These aquatic applications may be made ONLY in those cases where there are alternative

water sources or holding ponds which would permit the turning off of an active potable water intake for a minimum period of 48 hours after the applications. This restriction does not apply to intermittent inadvertent overspray of water in terrestrial use sites.

- Do not spray open bodies of water where woody brush, trees and herbaceous weeds do not exist.
- The maximum application rate of 3.75 quarts per acre must not be exceeded in a single over-water broadcast application except as follows, where any labeled rate may be applied:
  - Stream crossings in utility rights-of-way.
  - Where applications will result in less than 20 percent of the total water area being treated.

## **10.0 WILDLIFE HABITAT RESTORATION AND MANAGEMENT AREAS**

This product can be used for the restoration and/or maintenance of native habitat and in wildlife management areas.

Habitat Restoration and Maintenance - When applied as directed, exotic and other undesirable vegetation may be controlled in habitat management areas. Applications may be made to allow recovery of native plant species, to open up water to attract waterfowl, and for similar broad-spectrum vegetation control requirements in habitat management areas. Spot treatments may be made to selectively remove unwanted plants for habitat enhancement. For spot treatments, take precautions to keep spray off of desirable plants.

Wildlife Food Plots - This product may be used as a site preparation treatment prior to planting wildlife food plots. Apply as directed to control vegetation in the plot area. Any wildlife food species may be planted after applying this product, or native species may be allowed to reinfest the area. If tillage is needed to prepare a seedbed, wait 7 days after applying this product before tilling to allow for maximum effectiveness.

## **11.0 WIPER APPLICATIONS**

For wick or wiper applications, mix 1.0 gallon of this product with 2.0 gallons of clean water to make a 33 percent solution. Include a nonionic surfactant at a rate of 10 percent by volume of total herbicide solution.

Wiper applications can be used to control or suppress annual and perennial weeds listed on this label. In heavy weed stands, a double application in opposite directions may improve results. See the "Weeds Controlled" section in this label for timing, growth stage and other instructions for achieving optimum results.

Bromegrass (smooth), Canarygrass (reed), Dock (curly), Mullein (common), Quackgrass and Canada thistle: This product may be applied through a wiper applicator after dilution with water and thorough mixing to these weeds growing in or along aquatic sites.

Wiper applicators, including wick devices, apply the herbicide solution by rubbing the weed with an absorbent material containing the herbicide solution.

Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Adjust applicators being used above desired vegetation so that the lowest wiper contact point is at least two (2) inches above this vegetation. Make applications above desirable vegetation when the weeds are a minimum of six (6) inches above this desirable vegetation.

Best results may be attained when more of the weed is exposed to the herbicide solution. Weeds not contacted (wiped) with the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of the weed varies so that not all weeds are contacted.

In severe infestations, reduce equipment ground speed to ensure that adequate amounts of this herbicide solution are wiped onto the weeds. When wiping moderate weed infestations, use a flow rate of 3.0 to 4.0 quarts of herbicide solution per mile of canal (wiping 4 foot band). For best results, do not allow wiper applicator to contact water.

Note:

- Maintain wiper equipment in good operating condition.
- Adjust height of wiper applicator to ensure adequate contact with weeds.
- Keep wiping surfaces clean.
- Keep wiper material at proper degree of saturation with herbicide solution.
- DO NOT use wiper equipment when weeds are wet or under conditions where wave action or other water immersions will wash the solution off the weed.

- DO NOT operate equipment at ground speeds of greater than 5 MPH. As weed density increases, reduce equipment ground speed to ensure good coverage of weeds.
- Be aware that on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying on the upper end of the wiper applicator.
- Variation in equipment design may affect weed control. With wiper applicators, the wiping material and its orientation must allow delivery of sufficient quantities of the herbicide solution directly to the weeds.
- Mix only the amount of solution to be used during a one day period as reduced activity may result from use of leftover solutions.

#### Mixing Instructions:

Mix 2.5 gallons of this product with 7.5 gallons of water to prepare a 25 percent solution. Add 1.0 quart of an approved surfactant per 10.0 gallons of herbicide solution (2.5 percent surfactant by total volume). Apply this solution to weeds listed above.

## 12.0 INJECTION AND FRILL APPLICATIONS

Woody vegetation may be controlled by injection or frill application of this product. Apply this product using suitable equipment which must penetrate into living tissue. Apply the equivalent of 1.0 mL of this product per 2 to 3 inches of trunk diameter. This is best achieved by applying 25 to 100 percent concentration of this product either to a continuous frill around the tree or as cuts evenly spaced around the tree below all branches. As tree diameter increases in size, better results are achieved by applying dilute material to a continuous frill or more closely spaced cuttings. Avoid application techniques that allow runoff to occur from frill or cut areas in species that exude sap freely after frills or cutting. In species such as these, make frill or cut at an oblique angle so as to produce a cupping effect and use undiluted material. For best results, make applications during periods of active growth and full leaf expansion.

This treatment WILL CONTROL the following woody species:

Oak

*Quercus spp.*

Poplar

*Populus spp.*

Sweet gum

*Liquidambar styraciflua*

Sycamore

*Platanus occidentalis*

This treatment WILL SUPPRESS the following woody species:

Black gum\*

*Nyssa sylvatica*

Dogwood

*Cornus spp.*

Hickory

*Carya spp.*

Maple, red

*Acer rubrum*

\*This product is not approved for this use on these species in the state of California.

## 13.0 COOL SEASON TURF GROWTH REGULATION

When applied as directed, this product will suppress growth and seedhead development of listed turf species in industrial sites.

This product is for management of coarse turf on roadside rights-of-way or other industrial areas. Do not use on high-quality turf (e.g. grass grown for seed or sod, home and ornamental lawns) or other areas where some turf color changes cannot be tolerated. Slight turf discoloration may occur but turf will regreen and regrow under moist conditions as effects of this product wear off.

Apply 3.0 to 5.0 fluid ounces of this product per acre alone or as directed for a tank mixture, at spray volumes of 10.0 to 40.0 gallons per acre.

When using this product, mix 2.0 quarts of a nonionic surfactant per 100 gallons of spray solution. This product can be used for growth and seedhead suppression of:

Tall Fescue, Smooth Brome

For best results, apply this product in a tank mixture to actively growing turfgrasses after greenup in the spring of the year. For suppression of seedheads, applications must be made before boot-to-seedhead stage of development. Applications made from seedhead emergence until maturity may result in turf discoloration or injury.

After mowing or removal of seedheads, this product in a tank mixture may also be used to suppress the growth of certain turfgrasses. Allow turf to recover from stress caused by heat, drought or mowing before making applications. Applications made to turf under stress may increase the potential for discoloration or injury.

### **ANNUAL GRASSES**

For growth suppression of some annual grasses such as annual ryegrass, wild barley and wild oats, apply 3.0 to 4.0 ounces of this product in 10.0 to 40.0 gallons of spray solution per acre. Make applications when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.

### **TANK MIXTURES**

For the following tank mixtures, consult each product label for weeds controlled and the proper stage of application. Do not treat turf under stress. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Tank Mixtures plus 2,4-D Amine

For additional weed control benefits, the labeled rate of 2,4-D amine may be added to the following tank mixtures.

### **TALL FESCUE**

This product plus Telar®

For suppression of tall fescue growth and seedheads, and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use up to 0.5 ounce of Telar® per acre.

This tank mixture can also be applied after mowing or removal of tall fescue seedheads for turf growth suppression and control or partial control of some annual weeds. Make only one of the above applications per growing season.

This product plus Oust®

For suppression of tall fescue growth and seedheads, and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use the labeled rate of Oust®.

This product plus Escort®

This tank mixture can be applied after mowing or removal of tall fescue seedheads for turf growth suppression and control or partial control of some annual weeds. Use the labeled rate of Escort®.

### **SMOOTH BROME**

This product plus Oust®

For suppression of smooth brome growth and seedheads and control or partial control of some annual weeds, apply this tank mixture after greenup and prior to boot-to-seedhead stage of development. Use the labeled rate of Oust®.

## 14.0 RELEASE OF BERMUDAGRASS OR BAHIAGRASS ON NONCROP SITES

### RELEASE OF DORMANT BERMUDAGRASS AND BAHIAGRASS

When applied as directed, this product will provide control or suppression of many winter annual weeds and tall fescue for effective release of dormant bermudagrass or bahiagrass. Make applications to dormant bermudagrass or bahiagrass.

For best results on winter annuals, treat when weeds are in an early growth stage (below 6 inches in height) after most have germinated. For best results on tall fescue, treat when fescue is in or beyond the 4 to 6-leaf stage.

### WEEDS CONTROLLED

Rate specifications for control or suppression of winter annuals and tall fescue are listed below.

Apply the specified rates of this product in 10.0 to 25.0 gallons of water per acre plus 2.0 quarts nonionic surfactant per 100 gallons of total spray volume.

### WEEDS CONTROLLED OR SUPPRESSED

NOTE: C = Control  
S = Suppression

WEED SPECIES	Glypho 648 oz/A					
	6.0	9.0	12.0	18.0	24.0	48.0
Barley, little <i>Hordeum pusillum</i>	S	C	C	C	C	C
Bedstraw, catchweed <i>Galium aparine</i>	S	C	C	C	C	C
Bluegrass, annual <i>Poa annua</i>	S	C	C	C	C	C
Chervil <i>Chaerophyllum tainturieri</i>	S	C	C	C	C	C
Chickweed, common <i>Stellaria media</i>	S	C	C	C	C	C
Clover, crimson <i>Trifolium incarnatum</i>	•	S	S	C	C	C
Clover, large hop <i>Trifolium campestre</i>	•	S	S	C	C	C
Speedwell, corn <i>Veronica arvensis</i>	S	C	C	C	C	C
Fescue, tall <i>Festuca arundinacea</i>	•	•	•	•	S	S
Geranium, Carolina <i>Geranium carolinianum</i>	•	•	S	S	C	C
Henbit <i>Lamium amplexicaule</i>	•	S	C	C	C	C
Ryegrass, Italian <i>Lolium multiflorum</i>	•	•	S	C	C	C
Vetch, common <i>Vicia sativa</i>	•	•	S	C	C	C

\*These rates apply only to sites where an established competitive turf is present.

### RELEASE OF ACTIVELY GROWING BERMUDAGRASS

Use only on sites where Bahiagrass or Bermudagrass are desired for ground cover and some temporary injury or yellowing of the grasses can be tolerated.

When applied as directed, this product will aid in the release of Bermudagrass by providing control of annual species listed in the "Weeds Controlled" section in this label, and suppression or partial control of certain perennial weeds.

For control or suppression of those annual species listed in this label, use 0.75 to 2.25 pints of this product as a broadcast spray in 10.0 to 25.0 gallons of spray solution per acre, plus 2.0 quarts of a nonionic surfactant per 100 gallons of total spray volume. Use the lower rate when treating annual weeds below 6 inches in height (or length of runner in annual vines). Use the higher rate as size of plants increases or as they approach flower or seedhead formation.

Use the higher rate for partial control or longer-term suppression of the following perennial species. Use lower rates for shorter-term suppression of growth.

Bahiagrass, Dallisgrass, Fescue (tall), Johnsongrass\*\* , Trumpet creeper\* , Vaseygrass

\*Suppression at the higher rate only.

\*\*Johnsongrass is controlled at the higher rate.

Use only on well-established Bermudagrass. Bermudagrass injury may result from the treatment but regrowth will occur under moist conditions. Do not repeat applications in the same season, since severe injury may result.

## 15.0 BAHIAGRASS SEEDHEAD AND VEGETATIVE SUPPRESSION

When applied as directed in the "Noncrop Sites" section in this label, this product will provide significant inhibition of seedhead emergence and will suppress vegetative growth for a period of approximately 45 days with single applications and approximately 120 days with sequential applications.

Apply this product 1 to 2 weeks after full green-up of Bahiagrass or after the Bahiagrass has been mowed to a uniform height of 3 to 4 inches. Applications must be made prior to seedhead emergence. Apply 5.0 fluid ounces per acre of this product, plus 2.0 quarts of an approved nonionic surfactant per 100 gallons of total spray volume in 10.0 to 25.0 gallons of water per acre.

Sequential applications of this product plus nonionic surfactant may be made at approximately 45-day intervals to extend the period of seedhead and vegetative growth suppression. For continued vegetative growth suppression, sequential applications must be made prior to seedhead emergence.

Apply no more than 2 sequential applications per year. As a first sequential application, apply 3.0 fluid ounces of this product per acre plus nonionic surfactant. A second sequential application of 2.0 to 3.0 fluid ounces per acre plus nonionic surfactant may be made approximately 45 days after the last application.

## ANNUAL GRASS GROWTH SUPPRESSION

For growth suppression of some annual grasses, such as annual ryegrass, wild barley and wild oats growing in coarse turf on roadsides or other industrial areas, apply 3.0 to 4.0 ounces of this product in 10.0 to 40.0 gallons of spray solution per acre. Mix 2.0 quarts of a nonionic surfactant per 100 gallons of spray solution. Make applications when annual grasses are actively growing and before the seedheads are in the boot stage of development. Treatments made after seedhead emergence may cause injury to the desired grasses.

## 16.0 STORAGE AND DISPOSAL

Do not contaminate water, food, feed or seed by storage or disposal.

**PESTICIDE STORAGE:** Store above 10 °F (-12 °C) to keep product from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 68 °F (20 °C) for several days to redissolve and roll or shake container or recirculate in mini-bulk or bulk container to mix well before using.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed must be disposed of in a landfill approved for pesticide disposal or in accordance with applicable federal, state, or local procedures. Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleansed, reconditioned, or destroyed.

**CONTAINER HANDLING: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). Triple rinse or

**Storage and Disposal Cont'd:**

pressure rinse container (or equivalent) promptly after emptying.

**For packages up to and equal to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI Storage and Disposal cont'd: for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.**

## 17.0 CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE. IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC.

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